C129

CALIFORNIA

OIL WORLD

Univ of Texas Library
Serials Acquisition
Main Bldg 153 LIIGR
Austin 12, Texas

COVERING Alaska Arizona California Colorado Idaho Montana New Mexico Nevada Oregon Utah Washington Wyoming • Western Canada

TWICE MONTHLY • FIRST ISSUE • OCTOBER 1960 • 53rd Year Vol. 53 No. 19

BJ

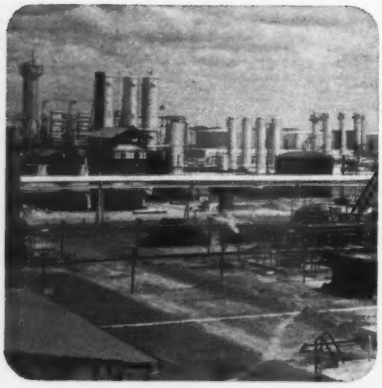
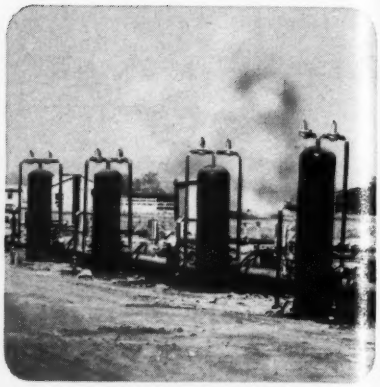
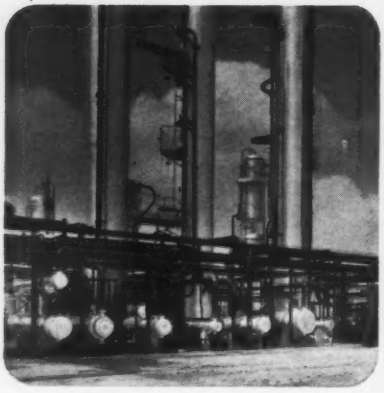
BJ

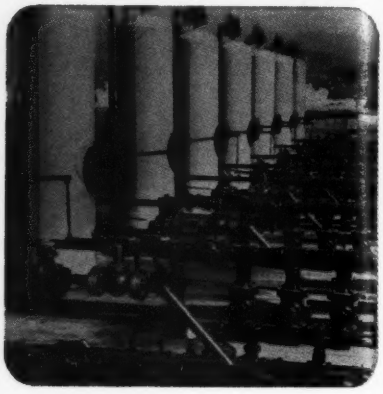
QUALITY COSTS LESS IN THE LONG RUN!

Quality

costs less

in the long run!

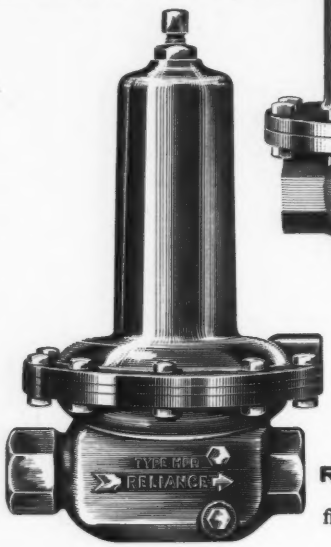




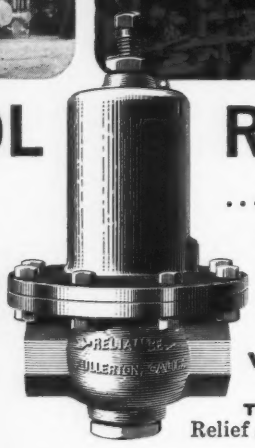


CONTROL RELIABILITY

...*a dynamic factor* in oil field and production installations

RELIANCE® EQUIPMENT HAS BEEN "FIELD-PROVEN" YEAR AFTER YEAR BY UNSURPASSED RECORDS OF PERFORMANCE





VALVES *for relief, back pressure and pressure limiting applications*

TYPE "RV", "DV" AND "PLV"—Type "RV" Toggle-Action Relief and Back Pressure Valves for high pressure transmission line take-offs. Maximum relief setting 125 psi.

Type "RV 200" and "DV 200" Relief, Back Pressure and Differential Valves for liquids or gases in refineries, gasoline plants, and hydrocarbon distribution installations. Maximum relief setting 225 psi.

Type "PLV" Pressure Limiting Valves for manual reset shut-off installations, breakable disc type for shut-off pressures from 15 to 150 psi. Maximum working pressure after shut-off 500 psi.

REGULATORS *for reducing, relief and back pressure applications*

TYPE "HPR"—High pressure, primary pounds-to-pounds regulators for first and second stage regulation for farm taps, gasoline plants and refining installations, and for use at the wellhead. Inlet pressures to 1000 psi and outlet pressures from 2½ to 350 psi. Also available with bronze body casting for inlet pressures to 2000 psi.

CONTROL...*first step to efficiency* • *Write for bulletins containing complete specifications*

AMERICAN® METER COMPANY
INCORPORATED (ESTABLISHED 1836)

AMERICAN METER CO MEASUREMENT ENGINEERS

RELIANCE® REGULATOR DIVISION
FULLERTON, CALIFORNIA

CALIFORNIA
OIL WORLD

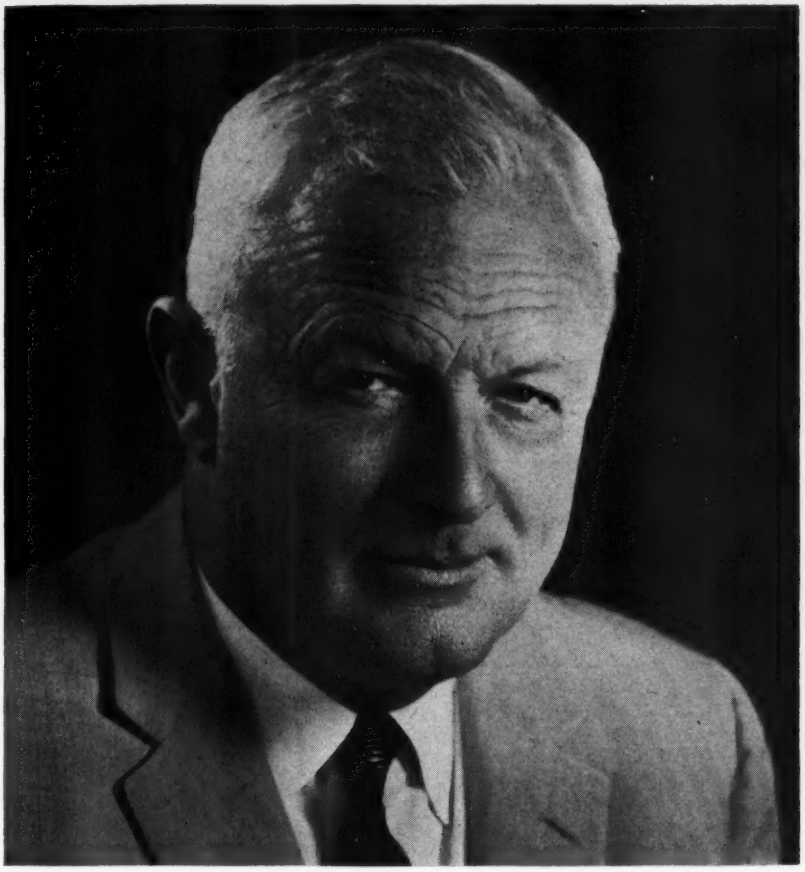
PUBLISHED TWICE A MONTH
By
PETROLEUM PUBLISHERS, INC.

KINZIE MILLER—President and Editor • RICHARD SNEDDON—Contributing Editor
LELA MONROE—Vice President • LARRY O. MILLER—Secretary and Advertising Manager
2404 WEST 7th STREET, LOS ANGELES 57, CALIFORNIA • DUnkirk 2-6218
BRANCH OFFICES
CHICAGO—FRED JONES & SON—Room 517, 205 W. Wacker Drive, Chicago 6
CLEVELAND—HOWARD F. McCLENAHAN—1900 Euclid Ave., Cleveland 15
NEW YORK—JAY TUTHILL—501 FIFTH AVENUE, NEW YORK 17

AUDITED PAID CIRCULATION ABC

• FIRST ISSUE
OCTOBER, 1960
VOL. 53 • NO. 19
WHOLE NO. 2049
October 15, 1960

California Oil World is published twice a month at 2404 West 7th St., Los Angeles 57, California. Second-Class Postage Paid at Los Angeles, California. Subscription price $1 per year in U. S. and possessions, $2 in foreign countries including Canada.



Dudley Tower
New President of Union Oil Company

Reese H. Taylor, chairman of the board and chief executive officer, announced that the Union Oil directors had elevated Dudley Tower from executive vice president to president. He succeeds Mr. Taylor as president, who since last April has been both chairman of the board and president.

Mr. Tower was first employed by Union Oil Company in 1935 as a pipe line roustabout at Long Beach. Following assignments in drilling and production work in California, he became district engineer at Houston, Texas, and in 1946 was named manager of operations for Union's Gulf division. He became a vice president in 1953 and returned to Los Angeles headquarters in 1955 as vice president in charge of field operations (drilling, production, and engineering). He was elected to the board of directors of the company

on April 10, 1956, and on April 27, 1960, was elected executive vice president.

The elevation of Dudley Tower to the presidency of Union Oil Company of California is very pleasing to his many friends in the petroleum industry, and yet it comes as no great surprise. Anyone who has had the good fortune to associate with him in conferences and committee meetings must have realized that besides being friendly and easy of approach, he is liberally endowed with the qualities and characteristics that make for effective leadership. He has that particular analytical capacity and appreciation of logic that are necessary to the rationalization of difficult situations and to the satisfactory resolution of business perplexities.

The widening scope of oil operations in these forward times, both geographically and scientifically, demands institutional direction of the highest order. We are moving into exciting areas of automatic operation, unlimited syntheses of petrochemicals, the great new world of the fragmented atom, and even interplanetary communication and flight. In all of these the petroleum industry of tomorrow will have an important role to play. How well it will play that role will depend entirely on its choice of leadership.

Dudley Tower not only has the academic training and actual experience to fit him for the high office he now holds, but in addition has in full measure the gift of understanding that will enable him to sense trends, and to absorb and utilize to the best advantage the pertinent discoveries of science. He is sufficiently plastic to adapt himself to the sane new way, the sane new idea, but still has that solid regard for business economics that will keep him on the rational path to progress. To all these attributes add a keen sense of humor and a genuine regard for people, and it is easy to see that the future of Union Oil Company is in excellent hands.

New Completion Technique Used by Richfield In Offshore Peruvian Well

Successful ocean-floor completion of an oil well off the northern coast of Peru was announced by Richfield Oil Corporation and Cities Service Company. The well, Humboldt 3-3, is located 6200 feet offshore in 132 feet of water near Cabo Blanco. It was drilled and completed from the floating drilling barge "Rincon" by Peruvian Pacific Petroleum Company, a subsidiary of Cities Service, in a joint venture with Richfield.

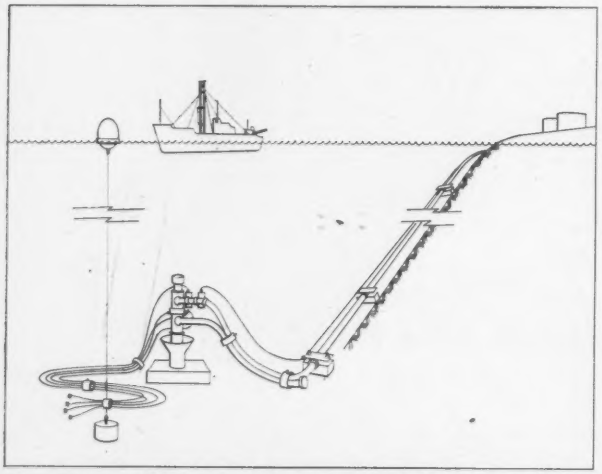
The wellhead extends only 12 feet above the ocean floor, and the well produces to tanks onshore through a 3" aluminum pipe line anchored to the bottom.

This new development in offshore well completions could be of tremendous significance in eliminating the necessity of using costly platforms for oil field development — utilizing, instead, the efficient and highly mobile floating drill barges previously used only in exploratory drilling. However, the operator noted that bringing a well to production is only the first step toward this end.

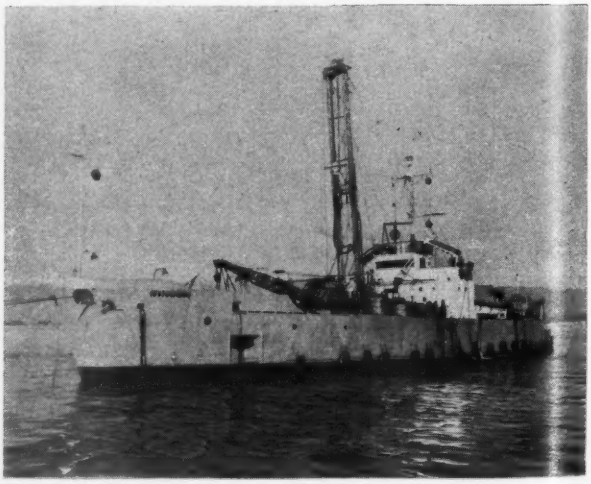
Complete success will be realized only when wells can be produced to abandonment, through not only the flowing stage but also for the period when the oil must be artificially lifted or pumped to the surface — with a system that provides economic means of performing remedial operations as they become necessary. All this must be accomplished for years, not just a few weeks, through good weather and bad.

Although the operator has high hopes of attaining these ends, several necessary steps have yet to be accomplished and a considerable period of time will elapse before complete success is assured.

The well is located on one of several large offshore concessions under lease to Peruvian Pacific along Peru's northern coast. The "Rincon"



Ocean floor wellhead on Peruvian well is depicted above. Hoses on the left, tied to buoy, are control hoses used in bringing the well into production from the drilling barge. They are left plugged on the ocean floor to be used in case remedial work is required. Plugged line tied to the oil line that runs to shore is installed for possible later use in artificially lifting oil from the reservoir. Top of wellhead is 12 feet off ocean bottom.



The 600-ton drilling barge "Rincon," owned by Richfield Oil Corporation, was used for drilling and completion on the ocean floor of the Humboldt 3-3 well. The converted LSM has been in Peruvian waters since early 1959 when it was towed from California for use by Peruvian Pacific Petroleum Company.

CONTINENTAL-EMSCO'S

NEW RANGE OF SLUSH PUMP SIZES

meets every rig requirement

The D-375, one of the new sizes of C-E's extended line of modern, proven slush pumps (other sizes in this range, D-125, D-225 and D-550).

Now you get Continental-Emsco's field proven slush pump engineering and quality control in all sizes . . from the smallest to the largest.

FABRIFORM POWER END . .
easier handling around the rig . . lighter weight without sacrificing strength.

COMPACT GEAR DESIGN . .
less weight but more than adequate capacity for today's increased horsepower requirements.

ROLLER BEARINGS . .
free rolling action cuts load on prime mover . . extends service life . . no field adjustments required.

REPLACEABLE CROSSHEAD GUIDES . .
easy replacement reduces maintenance and down time . . greatly extends usable life of pump . . slippers can be replaced in larger pumps.

AUTOMATIC LUBRICATION . .
all parts are automatically lubricated regardless of pump speed.

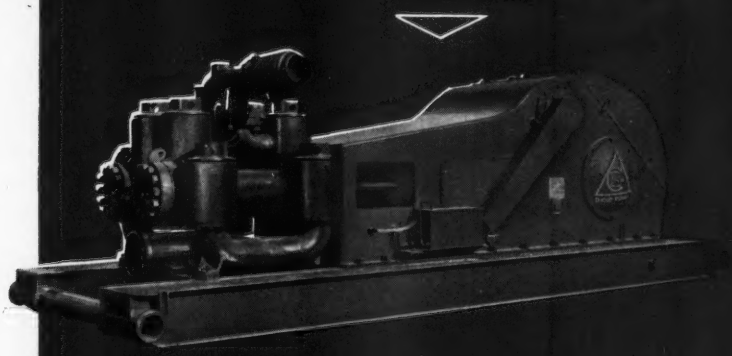
STEEL FLUID END . .
designed to handle all muds at highest operating pressures with maximum efficiency.

PATENTED EXPOSED LINER DESIGN . .
safeguards against fluid end washouts caused by packing failures.

THREADED VALVE-POT COVERS . .
speed up valve inspection, servicing and replacement. Assure maximum fluid flow with minimum turbulence.

SCREW-TYPE STUFFING BOX GLANDS . .
assure uniform pressure on packing . . eliminate uneven packing wear, cause of premature packing failure and rod scoring.

Check these features. See why overseas operators, drilling in remote areas, have more confidence in Continental pumps. Regardless of your operation . . local or worldwide . . buy Continental pumps and take advantage of their ability to pump more mud at lower cost.



Pumps for Drilling . . . Mud Mixing . . . Utility

D-1000—Maximum Input . . 1000 hp @ 90 rpm
D-850—Maximum Input . . 850 hp @ 80 rpm
D-700—Maximum Input . . 700 hp @ 65 rpm
D-550—Maximum Input . . 550 hp @ 65 rpm
D-375—Maximum Input . . 375 hp @ 70 rpm
D-225—Maximum Input . . 225 hp @ 70 rpm
D-125—Maximum Input . . 125 hp @ 85 rpm

MANUFACTURED AND SOLD WORLDWIDE BY

CONTINENTAL-EMSCO

Serving the Oil and Gas Industries ... Worldwide

SP902

CONTINENTAL-EMSCO COMPANY • A Division of The
Export Division: 30 Rockefeller Plaza, New York, N. Y. • Continen
Continental-Emsco Company C. A., Caracas, Venezuela • Plants: Houston and Garland, Texas; St. Alba

was towed from California to Peru early in 1959 to explore for commercial oil accumulations. To date, 11 test wells have been drilled with the barge.

Brief tests of oil zones encountered in some of the early wells indicated substantial production, but not of such a nature as to justify the expenditure of millions of dollars necessary to tow heavy construction equipment thousands of miles to construct platforms and develop the oil reserves using conventional offshore methods. In addition, some of the zones encountered were so shallow that conventional directional drilling techniques could not be used.

Depth of Humboldt 3-3 well is approximately 1000 feet. The pool cannot be economically produced from a platform at that depth, since wells could not be slanted far enough out in such a short vertical depth. Thus, the new method had to be attempted in order to produce from the pool.

The wellhead, constructed of high-alloy steel, was fabricated by the Shaffer Tool Works of Brea, Calif., and was then shipped to Peru ready for installation. Divers were not used to install the head but were used for inspection purposes, pipe line connection at the head, and installation of weights on the flowline; however, if absolutely necessary, the designers believe they could complete a well without using divers at all.

Two aluminum pipe lines were bundled together and strung out on the 6200-foot course from wellhead to storage tanks. The 3" line is for oil and gas, and the ½" line is a hydraulic valve control line. Using aluminum pipe, the operator was able to avoid the need for heavy equipment such as barge cranes, for the relatively light and highly flexible aluminum could be pulled into place with winches aboard the drilling vessel.

The 50-foot sections, especially rolled by The Aluminum Company of America, were transported to the fabrication site on the beach, welded together, the two lines strapped into a bundle, then pulled into the surf and floated to the well location through anchored guide buoys. The pipe was then weighted, sunk into place on the ocean floor, and connected to the wellhead. The well was brought in flowing 480 barrels per day of 36.5 degree gravity oil, then reduced to 200 barrels per day for more efficient production.

Possibility of leakage, one of the main problems in designing the wellhead, has been guarded against in several ways. Double seals are used in all cases. A "fail-safe" valve on the wellhead is designed so that it closes automatically unless held open by pressure in the hydraulic line. If any oil shows are spotted, pressure in the hydraulic line is cut off immediately. Also, if the flowline is cut, the hydraulic line pressure will be relieved automatically and the valve will close.

Provisions have been made for installing a storm-choke some 200 feet down the hole to shut off production automatically in case the wellhead is sheared off for any reason.

Peruvian Pacific's operations are carried on from headquarters in Lobitos, a town about 25 miles from Cabo Blanco. Approximately 100 people are at work on the venture, either afloat or ashore. Native rotary crews are aboard the "Rincon."

Oil fields dot the coast in the area where Peruvian Pacific has been exploring, and the Humboldt well is considered a new pool in an extension of the El Alto field onshore.

Additional submarine wellheads are presently being fabricated in Los Angeles and will be shipped to Peru for installation on future wells to be completed there.

California Heavy Crude Prices Increased

Effective at 7 a.m. Saturday, Sept. 24, buyers of crude in California raised prices of 14 gravity oil 10 cents per barrel, the increase ranging down to one cent per barrel of approximately 22 gravity. There was no price change for oil above 25 gravity.

At the same time price increases of 10 cents per barrel for Bunker C and other fuel oils, effective Sept. 28th, on the West Coast, Alaska and Hawaii were announced. The reason for the change is occasioned by steady demand for heavy crude oils and for heavy fuel oil refined from these crudes.

Tidewater Oil Company recently became the first major oil company contracting to honor Bank of America credit cards at all Flying "A" service stations in California. Signing the agreement were James McDonald, left, Tidewater's Western Division assistant general manager, and Robert L. Miller, right, manager of Bank of America's Wilshire-Crenshaw branch located in the Tidewater Building, Los Angeles. Looking on is P. C. Orme, Tidewater's Western Division credit card supervisor. There are currently two million "Bankamericard" holders in California.

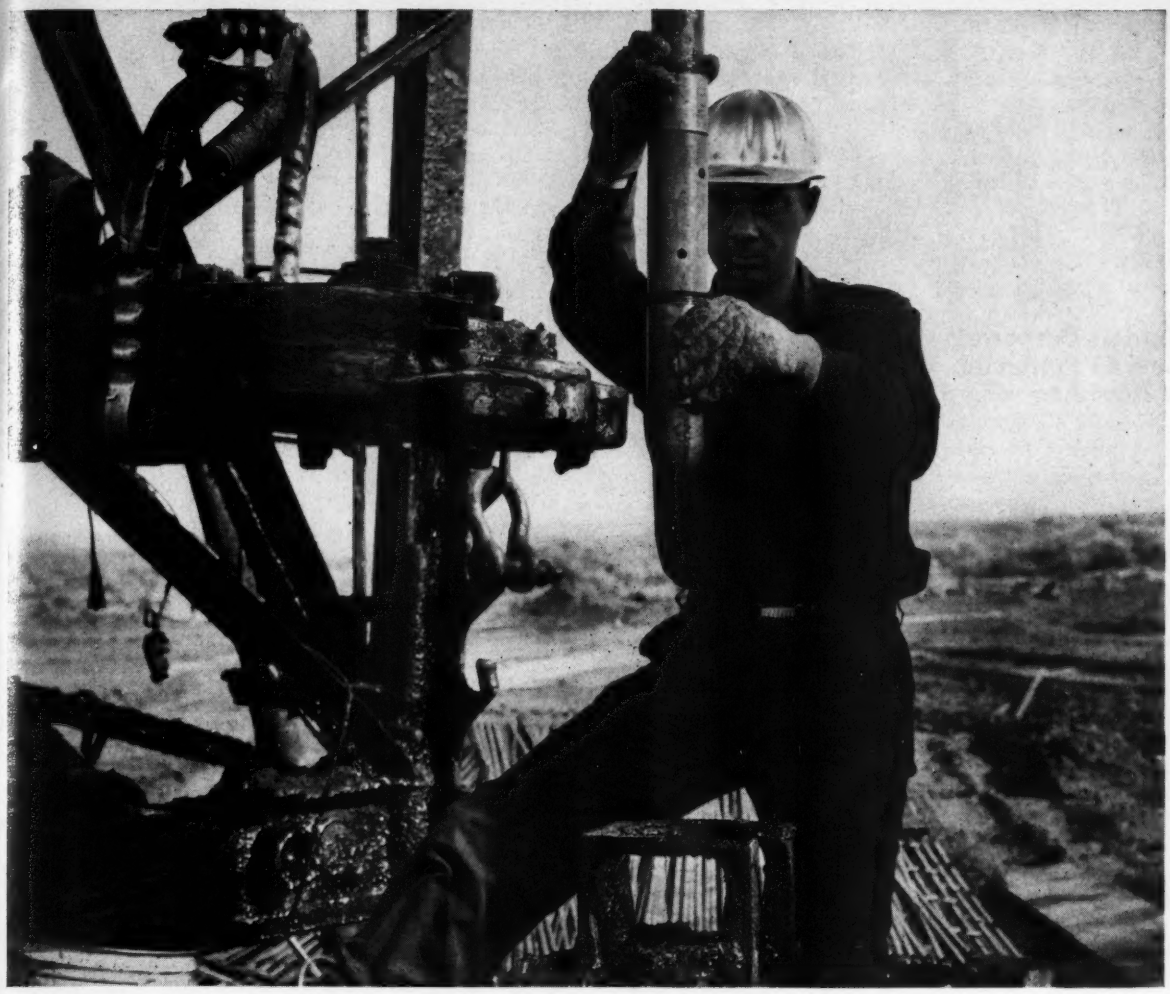
Book for Management Authored by Garvin Of S. O. of Calif.

One of the most important new analytical methods used by American management today is linear programming, a mathematical technique which considers complex industrial operating problems in terms of making optimum use of equipment and raw materials.

In a new text, "Introduction to Linear Programming," just published by McGraw-Hill, industrial mathematician Walter Garvin describes how the method can be applied to a wide variety of operating problems, from selecting blends for oil refinery runs to scheduling the most efficient use of sea-going transport.

The book assumes a knowledge of college-level algebra on the part of the reader. It is designed to "fill the gap between the more abstract treatises intended for specialists and the extremely basic type of book popularized for the tired businessman."

"Introduction to Linear Programming" is based on a series of lectures given to a group of Standard Oil Company of California scientists, engineers and economists by Garvin, who is senior staff mathematician for the company.



KERN COUNTY OPERATOR GETS 80 BOPD FLOWING WELL-OFFSETTING SMALL PUMPER

More and more operators are reporting exceptionally good results from fracturing treatments preceded by Abrasijet*—Dowell's abrasive jetting service. With Abrasijet, notches can be cut to initiate fractures in the direction and plane desired. For example, it can be used to initiate horizontal fractures, reducing the danger of opening a vertical fracture into water or gas. In addition, this combination treatment often costs less than conventional perforating and fracturing.

In Kern County, California, for example, Dowell used a combination of Abrasijet, Rockshock* and calculations with the "Frac Guide"* to get an 80 bopd flowing well where the offset produced only 25 bopd pumping. Two zones at 8403 and 8337 feet were treated separately. First, a circular notch was cut, using Abrasijet. Then, the pay was broken down with Rockshock and the fractures were packed with 10/20-mesh sand. *The $15,000 treatment more than paid for itself by eliminating the need for pumping equipment.*

Ask your Dowell representative to show you how this combination of Abrasijet and fracturing can help improve your production and hold stimulation costs at a minimum. For prompt service or detailed information, call the nearest Dowell office or station. Dowell services and products are offered from more than 150 offices and stations in the United States, Canada, Venezuela, Argentina and Germany. Dowell, Tulsa 1, Oklahoma.

*DOWELL TRADEMARK

Services for the oil industry DOWELL

DIVISION OF THE DOW CHEMICAL COMPANY

Association Announced

John B. Vallely and G. Gary Brown are now associated with Vallely and Brown, engineering firm in Bakersfield, California.

The petroleum consultants, Vallely and Brown, have their office at 1831 Truxtun Avenue, Bakersfield, California. Telephone: FAirview 2-8914.

Nordon Corporation, Ltd. Gets 60 Producing Wells In New Acquisition

Nordon Corporation, Ltd., has substantially increased its property holdings, oil production and oil reserves with acquisition of accumulated developed and undeveloped property and 60 producing wells, it was announced by president Harry C. Long.

In the transaction, negotiated through the California Bank, Nordon took over all the California property and producing wells formerly owned by Barratt-Bysshe and the Cleveland Oil Co. in Kern, Los Angeles, Ventura and Orange counties.

Reserves under the undeveloped sectors are estimated by Lewis & Ganong, petroleum engineers and geologists of Bakersfield, Calif., at about 5 million barrels of oil.

The wells are producing on the average of approximately 600 gross barrels of 14 to 35 gravity oil per day at an average income of $2.40 per barrel.

Nordon's engineers feel that production of these wells can be increased from 150 to 200 barrels of oil a day without adding appreciably to cost. Plans are now under way to effect such a production increase as soon as possible.

Fifty-one of the wells were formerly owned by Barratt-Bysshe and nine by Cleveland Oil Co. They are located on the following fields: In Orange County, eight wells in Huntington Beach and three at Sunset Heights; in Los Angeles County, 23 wells in Wilmington, one on the Rosecrans Field and one at the Placerita Field near Newhall; in Ventura County, four wells on the Bardsdale Field; in Kern County, three wells on the Kern River Field, seven on the Edison Field, and ten on the Racetrack Hills Field.

Hopes High as Occidental Spuds In Wildcat Near Recent Gas Discoveries

Occidental Petroleum Corporation continued its search for increased gas production in the Sacramento Valley of Northern California by spudding in an exploratory well on its 5000-acre block in the Robbins Field, it was announced by Dr. Armand Hammer, president.

Designation as Robbins Unit A-1 and located in Sutter County at the northwest corner of Section 21, Township 12 North, Range 2 East, the well will be drilled to a total depth of approximately 7,500 feet.

Occidental's Robbins acreage is close to recent gas discovereis on the Buckeye Field eight miles to the northwest, where Western Gulf has drilled four producing gas wells in a row and is working on its fifth. Cameron Oil Co. has successfully completed its fourth gas well ten miles to the northwest.

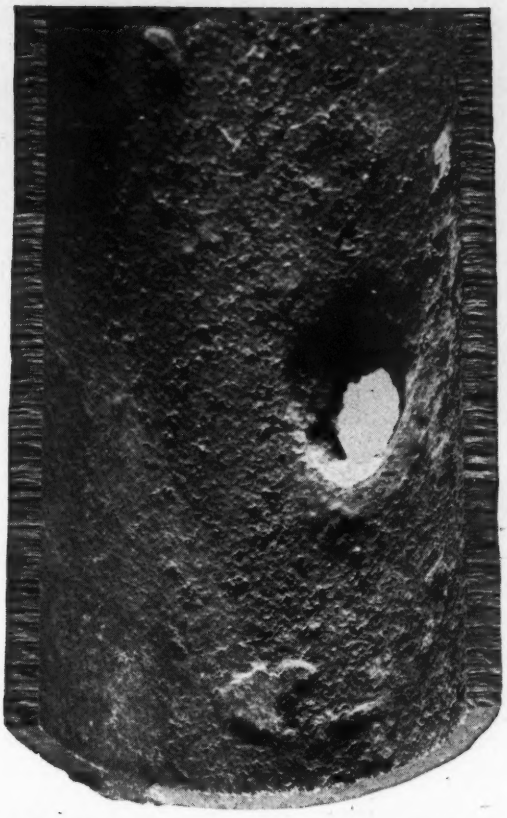
The producing Sycamore Slough gas field is approximately six miles due west of the Occidental lease block.

Dan Preston of The National Supply Company (center) being inducted into Associate Membership by Charlie King of Baker Oil Tools, Ritual Master (left) and C. F. Van Loozen of Gardner-Denver Company at the September 14, 1960 meeting of the Los Angeles Chapter of Nomads.

Wildcat Well To Be Drilled In Nevada

Richfield Oil Corporation has confirmed reports of its intentions to drill a rank wildcat in northern Nevada, which has had little or no drilling. The well will be located some 18 miles north and slightly east of Tuscarora on the Bull Run Structure of Elko County.

International guests and speaker at the September 14, 1960 meeting of the Los Angeles Chapter of Nomads. From left to right (front row) Bill Middlestead of Camdrill from Algeria; Ed Thatch of I.P.C. from Qatar; Fred Gholson of I.P.C. from Iraq; R. V. McCann of D & E from Libya; Jack Parker of Camdrill from Libya; John Sligh of D & D from Venezuela; (middle row) Frank Bragg, speaker; Jack Veny of Parker Drilling of Canada from Canada; Stan Nelson of Stanvac from Sumatra; Enrique Domingues of Signal Oil & Gas from Venezuela; (back row) B. J. Turner of Kuwait Oil Co. from Kuwait; Bernard Marrey of Baker Oil Tools from France; Robert G. Waters ex-Aramco from Saudi Arabia; Robert Linton of C.P.F.(A) from Algeria; Zeke McCoy of Caltex from Holland.



Sulfate reducing bacteria, cause of corrosion that penetrated this brine line, can now be controlled. New Visco Formulas prevent this attack, in brine, as effectively as in fresh water systems.

In Waterflooding: Strict Control of Sulfate-reducing and Sulfide-producing Bacteria In Brine as well as Fresh Water Systems.

STOPS ➤ **Pitting Corrosion**
Iron Sulfide Sludge Formation

Controlling sulfate-reducing and sulfide-producing bacteria in fresh or brine water injection systems is an integral part of Visco treatment for waterflooding . . . along with efficient clarification, scale prevention and corrosion control.

Effective, *economical* control of sulfate-reducing *and sulfide-producing* bacteria in waters of high chloride content is a new development in water treatment practice . . . one you should certainly investigate if control costs are running high—or effectiveness is less than excellent

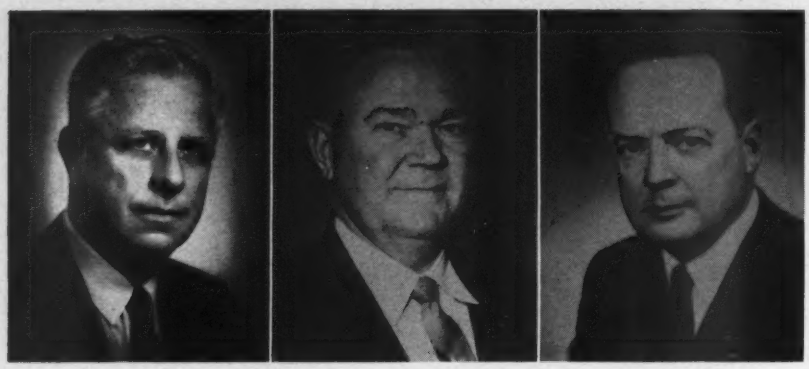
Write or call for action today.

VISCO PRODUCTS COMPANY
Incorporated
A Unit of Nalco Chemical Company
1020 Holcombe Boulevard **Houston 25, Texas**

Visco

. . . SERVING THE PETROLEUM INDUSTRY THROUGH PRACTICAL APPLIED SCIENCE

Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES
Visco CHEMICALS
Visco SERVICES



W. B. Lee T. O. Hall George C. McGhee

Exploration Geophysicists Meet Nov. 7-10 in Galveston

The 30th Annual International Meeting of the Society of Exploration Geophysicists will be held November 7-10 at the Moody Convention Center, Galveston, Texas.

Meeting Chairman W. B. Lee, Houston, has announced that the theme of the meeting will be "Total Exploration." Technical papers presented are expected to emphasize this theme by discussing all geophysical exploration methods. About 5,000 people, including members' families, are expected to be at the Galveston meeting.

George C. McGhee, Dallas, distinguished geophysicist, government official, and petroleum producer, will speak at the Kickoff Luncheon Monday, November 7. McGhee will discuss the "Political Climate for World Exploration."

S.E.G. President T. O. Hall, Houston, will open the business meeting with an address Monday afternoon. Presentation of honors and awards will follow.

Technical papers on a variety of geophysical subjects will be presented beginning Tuesday morning. Among the highlights of the meeting will be a series of papers Tuesday afternoon on Project VELA, the government's seismic research program. This program is aimed at improving seismic methods of detecting nuclear explosions.

Other sessions will be devoted to general geophysical topics, case histories, research, magnetic and gravity explorations, seismographic explorations and mining.

Recreational activities have been planned for both delegates and their wives. These activities include golf, cocktail parties, and a dance. Activities for wives include a brunch, a tour of the San Jacinto battleground, a luncheon-style show, and a coffee.

Tower of Union and Morgan of Texaco Elected to WOGA Board

Dudley Tower, president of Union Oil Co. of California, was elected to the WOGA board of directors, as was I. G. (Ike) Morgan, vice president of Texaco Inc. Morgan replaces James T. Wood, Jr., who retired frotm Texaco Aug. 31.

A.A.O.D.C. Elect Officers for 1961

John J. Moran, well-known Texas oilwell drilling contractor, was named 1961 president of the American Association of Oilwell Drilling Contractors at the 20th Annual Meeting of AAODC in New Orleans Sept. 27.

Mr. Moran, who will succeed W. L. McClusky of M. J. Delaney Company, Dallas, as head of AAODC, is chairman of the board of Moran Bros., Inc. and vice president of Moran Drilling Company, both of Wichita Falls, Texas.

Earle C. Hellums, president of Gracey-Hellums Corp., Houston, was named national vice president of the association. Other officers are: Warren L. Baker, executive vice president, Dallas; John S. Hagestad, John S. Hagestad Drilling Co., Bakersfield, vice president for California; Paul F. Rutledge, Rutledge Drilling Company, Santa Fe, New Mexico, vice president for Rocky Mountain.

The new AAODC president, a native of West Virginia, has been associated with the oil fields all of his life. He started his business career in 1912 and was first employed by the Millikin Pipeline Company at Drumright, Oklahoma.

R. R. McNaughton Elected AIME President for 1961

The 36,000-member American Institute of Mining, Metallurgical, and Petroleum Engineers has elected Ronald R. McNaughton of Trail, British Columbia as president for 1961.

Mr. McNaughton will take office on February 28, 1961, during the Institute's Annual Meeting in St. Louis. He is manager of the Metallurgical Division of The Consolidated Mining and Smelting Co. of Canada, Ltd. McNaughton will succeed Dr. Joseph L. Gillson of Wilmington, Del., who continues as president of AIME until February 28. Dr. Gillson formerly was chief geologist of E. I. du Pont de Nemours & Co.

Lloyd E. Elkins of Tulsa, production research director for the Pan American Petroleum Corp., will become the AIME president-elect in February, pointing toward his election as president for 1962, following McNaughton's term.

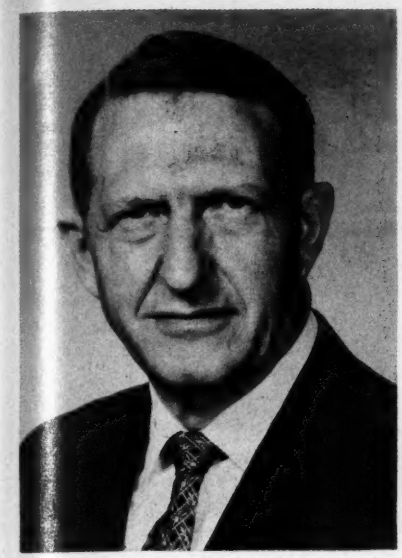
Also named to take office in February are several vice presidents, for one year each, and directors, for three years each. Among the new vice presidents will be:

John S. Bell of Houston, Gulf Coast area production manager, Humble Oil & Refining Co., former president of the Society of Petroleum Engineers of AIME.

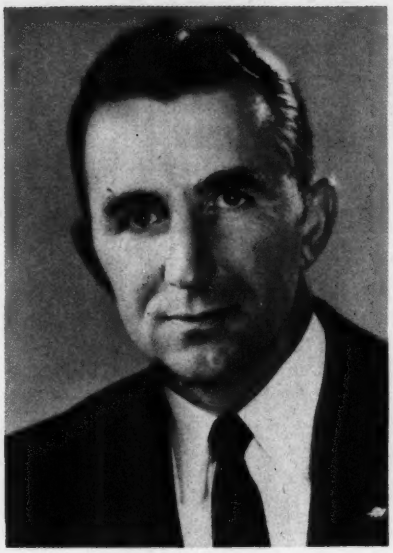
Wayne E. Glenn of Houston, general manager, production, Continental Oil Co., now president of the Society of Petroleum Engineers of AIME.

Among the new directors will be Robert B. Gilmore of Dallas, vice president of DeGolyer & McNaughton (representing Society of Petroleum Engineers).

Karl L. Fetters of Youngstown, Ohio, vice president of The Youngstown Sheet & Tube Co. (representing The Metallurgical Society).



Don Nutter



Wayne E. Glenn

Floyd Schoonover

1960 California SPE Meeting Set For Pasadena Oct. 20-21

Final plans for the 31st Annual California Regional Meeting, Society of Petroleum Engineers of the AIME, Oct. 20-21, at the Huntington Sheraton Hotel, Pasadena, have been set, according to Floyd Schoonover, Monterey Oil Co., chairman of the Los Angeles Basin Section, and Paul Andrews, Signal Oil & Gas Co., honorary chairman of the meeting.

Registration begins Thursday, Oct. 20, 9:45 a.m., with Andrews' welcoming speech preceding the technical program. Program chairman Don Nutter, Shell Oil Co., reports 23 papers will be presented over six sessions, Thursday morning through Friday afternoon.

Thursday's highlight will be the Annual Luncheon, with comments by 1960 SPE of AIME president Wayne E. Glenn, Continental Oil Co.

The meeting will be climaxed by the Friday evening, Oct. 21, Dinner-Dance in the new Viennese Room of the Huntington Sheraton at 8:00 p.m., with a cocktail party preceding at 6:30 p.m. in the same room.

Meeting registration will be handled by the Desk and Derrick Club of Los Angeles and petroleum students from the University of Southern California. A courtesy mailing of preprints of the meeting papers will be available. Exhibits in the patio area and Garden Room will be open from 9:00 a.m. to 4:00 p.m. both days.

AIME members in all California sections will have the opportunity to preregister through forms that will be sent in the regular September membership mailing. Also included will be a form for individual hotel reservations.

Completing the list of committee chairmen for the meeting are Arny Kane, Schlumberger Well Surveying Corp., dinner-dance; Bob Neath, Humble Oil & Refining, exhibits; Ed Mayer, Monterey Oil Co., secretary; Tiny Roe, Halliburton Co., arrangements. Mr. Roe's vice chairmen are Jim Streger, BJ Service Inc., registration; Jim Stough, Welex, Inc., hotel; Vernon Young, Halliburton Co., luncheon; Jack Rider, "Western Oil & Refining," publicity.

Luncheon Meeting

Professor W. H. Easton, U.S.C., gave an illustrated talk on "Geology Along the Roman Wall, England" at the luncheon meeting of the Pacific Section, A.A.P.G.

The luncheon was held October 6 in the Rodger Young Auditorium, 936 W. Washington Boulevard, Los Angeles, at 12:00 noon.

Paul Andrews

Reservations Now Being Received For Annual Meeting

The headquarters office of the Interstate Oil Compact Commission has mailed out reservation requests for the commission's Annual Meeting to be held in Phoenix, Ariz., December 5-7. The headquarters hotel will be the Westward Ho. In addition to rooms at this hotel, we have arranged for rooms at the Sahara Motor Hotel, near the Westward Ho.

Those desiring reservations should contact the IOCC Headquarters Office, P. O. Box 3127, Oklahoma City 5, Okla.

Petroleum LORE and LINGO

By RICHARD SNEDDON

The Prognosticative Urge

Ever since I first fell a victim of animus scribende, or writer's itch as it is better known, I have found it entertaining to stop occasionally and make some effort to determine whence the petroleum industry is headed. At irregular intervals I have written quite a number of these prophetic pieces and I find them even more amusing now than they were when they were first concocted. Twenty-eight years ago, for example, I had a flight of fancy in which I imagined myself a modern Rip Van Winkle who fell asleep after a particular arduous time during the depression of 1931 and didn't wake up again until 1950. I was a pipeliner when I began my long nap and here are some of my adventures and reflections when I eventually came to:

The Awakening

When I first opened my eyes, of course, I was completely unaware of the fact that time had taken such a tremendous fugit since I first lay down, but as soon as I arose and drew the front door back noiselessly on its chromium-plated hinges, and observed the dimension of the devil grass forest on the front lawn, I realized that somehow a considerable section had been sliced out of my budding career. Blinking stupidly in the glare of the sun, I stared out at the vista ahead, slowly assimilating the scene as my scattered senses, defying the antitrust law, gradually formed a merger.

Gaping in amazement at the unfolding panorama, I was presently startled into alertness by the sudden whirr of giant wings close at hand. This was followed by shrieks of childish laughter, and a group of small boys and girls flew swiftly out of the walnut tree that has always stood on the front lawn and took a precarious perch on one belonging to a neighbor across the street. Each of the little fellows was bedecked with a pair of wings, in some way attached between the arms and the waist, and I was intently trying to discern the manner of their operation when I was suddenly seized with a queer feeling of vertigo (just like people in books). Before I had time to turn around I had slumped on the front porch in a dead faint.

The Times and Changes

When I next awoke I was again lying on the couch, the seductive cushions of which had lulled me into my eighteen-year nap, and bending over me was a scientific-looking old party, whom I judged by his actions to be a doctor. "Ah! That's better," he said, as I slowly looked around with the dazed expression for which I have always been famous. "You'll soon be all right," he went on. "A little food will quickly give you back your strength, and then you can begin to enjoy yourself."

"But where am I, doctor?" I inquired eagerly.

"You are just exactly where you were eighteen years ago," he replied. "Since the beginning of 1932 you have slept continuously on the same couch on which you are now lying. The greatest scientists in the world have endeavored to rouse you, but in spite of the fact that you have apparently just been submerged in a normal sleep, they have absolutely failed in their efforts. Now you arise of your own accord, and I tell you, my man, it is well you are gifted with a strong heart. You will find many a profound change in our world today. The universe has advanced eighteen years while you have slept, and in this age a great deal is accomplished in eighteen years."

Flying Delinquents Yet!

As he delivered himself of this oration, the doctor turned towards the doorway, and for the first time I noticed that the youthful aviators were clustered around on the porch taking in the scene with undisguised curiosity. "Scram, children," he urged, and with a noisy whirr and much chattering the kids took off into the air. Having helped me to my feet and given me the final once-over, the doctor handed me a package of food pellets and a phial of super-concentrated milk. Then, extracting from his vest pocket a small glass tube very much like a miniature electric light bulb with a few projected wires attached, he held the thing to his lips and said very quietly, "I am ready to go now, Henry."

My name is Oswald, so I knew at once that he wasn't talking to me, and as I followed him to the door my conclusion was confirmed in a most extraordinary fashion. Hardly had the doctor uttered the words I have just repeated when slowly and with nothing more than a gentle purr there dropped onto the lawn a helicopter (so I learned later) of the most elegant and compact design. It was a small but luxurious affair with a body resembling in a distant way the tonneau of one of our more expensive 1932 coupes. It had no wings, but what it lacked in this respect it made up for in propellers. From a small, glassed-in chamber in the front of this vehicle the Henry person presently emerged, and as he opened the door to the compartment proper, a collapsible doorstep automatically extended itself, and the good doctor nonchalantly ascended to his seat. Henry closed the door behind him, took his own place in the driver's compartment, and with a cheery wave from the doctor, and the same soft purr from the mechanism, the apparatus rose straight into the air, leaving me on the balcony of my bachelor home, as completely befuddled as a wrestler at a sewing bee.

Once More Alone

Now I was in a fine pickle—if the exhibition I had just witnessed was any indication of the general trend of affairs. Simply because through no fault of my own I had happened to oversleep a little, here was I—Oswald Jenkins, oil worker of the

GUIBERSON TYPE F

AUTOMATIC AIR OPERATED TUBING SPIDER

Handle any length tubing string . . fast . . safe . . sure

BIG, TOUGH, RUGGED, Guiberson Type F Spider makes it possible for one man to handle the longest, heaviest tubing string safely with no scoring or crimping of the tubing. Slips have a long, generous contact with the pipe. Slips maintain 3-point contact for automatic alignment, maximum stability, even load distribution.

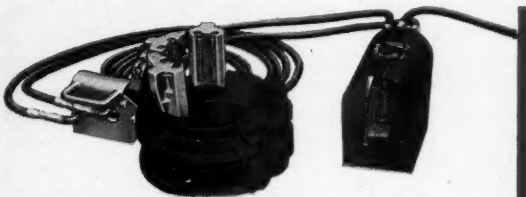
FAST AND SAFE, the Type F Spider speeds-up workover, completion jobs and slim-hole drilling with *hands-free* safety. Slips are released and retracted automatically by a remote control foot pedal, cutting time, eliminating the danger of hand operated slips. Slip inserts are easily and quickly replaced in the field.

SELECTOR ON THE FOOT VALVE provides: (1) single foot-pedal action, depress to retract slips, release to set slips or (2) double foot-pedal action, slips retract when pedal is depressed and released. Pedal must be depressed and released again to return slips to bowl. Both actions can be reversed by reversing hose connections at spider.

TWO OPERATIONAL PRESSURE RANGES are provided, 80-125 psi or 40-80 psi. Changing from one range to the other is a simple operation at the spider.

Save time . . gain extra safety . . with Guiberson Type F Spider . . get complete information from a Guiberson man or see it at your supply store.

Sold by Oil Field Supply Stores Everywhere



GUIBERSON TYPE H AUTOMATIC AIR OPERATED TUBING SPIDER is a short, compact version of the Type F . . designed for medium depth wells up to 9,000′ for 2⅜″ O.D., 8,000′ for 2⅛″ O.D., or 6,000′ for 3½″ O.D. tubing.

SAFE THAN SORRY BETTER BE GUIBERSON

THE

GUIBERSON

CORPORATION

ESTABLISHED 1919

DALLAS, TEXAS U. S. A.

vintage 1932—launched into an age of super-men with whom I could never hope to compete, and of super-contraptions with which I was entirely unqualified to meddle.

"But," I thought as I wandered slowly back into the house, "surely everything hasn't progressed beyond the scope of my understanding in the short space of eighteen years. Some industries, some processes, develop slowly, and besides there must still be a few of my old friends left who will be glad to help me adapt myself to the new conditions. It takes more than eighteen years to create a brand new generation."

A Visitor

As I entered the sitting room of my apartment and for the first time took a good look around, I could see immediately that my home had not been neglected during my siesta. Substantially it was the same, but there were many little evidences of a sympathetic interest and attendance. That thin film of dust on the table top was just the accumulation of hours, not years, and I was positive that the positions of certain pieces of furniture had been altered since I last saw them. I had just started over to see if the telephone company had got tired of waiting for payment and disconnected my phone when steps sounded on the cement walk leading to the house, and in walked a natty-looking gentleman with a Vandyke beard.

When he saw me he looked with evident astonishment at the couch on which I had been sleeping and then back at me as he stammered, "By golly, Oswald, so you woke up at last. Believe me, boy, you're a sound sleeper, even for an oil worker. Do you remember me?"

Early Beatnik

I peered foolishly but earnestly at his features for a few seconds trying to recollect, then I replied, "You look a lot like Bill Hagen of the personnel department, but he didn't have chin whiskers and is a much younger man than you."

"He was, eighteen years ago," said the visitor, "but he's just the same age as I am now. In fact, your guess was O.K. I'm Bill, sure enough, and I've visited you every day since you started on your snooze marathon. But how do you feel, old top?"

"Well," I answered, "I'll feel fine if you'll promise me a job. Who got my old job, anyway?"

"Your old job is no more," said Bill, "but let's not worry about that now. I have a little business to attend to at Richfield, so come on and take a spin with me, and we can talk as we ride."

I jumped at this proposal like a flash, and despite the fact that my own face was cunningly ambushed behind a luxuriant crop of fungus, and my hair would have shamed the Seven Sutherland Sisters, I grabbed a hat, and balancing it perilously on top of the haystack, proceeded to follow my guide.

We're Off to See the Wizard

"Where's your car?" I asked when we got outside.

"Just around the corner," he replied with a twinkle in his eye.

"Say," I interjected, "that reminds me. Prosperity was just around the corner when I turned in for my long nap. Did he ever come out in the open and show himself?"

"I'll say," said Bill. "We don't have depressions any more. Scientists discovered long ago that they are simply the result of a sympathetic reaction of the pituitary gland. In other words, when you get in a pessimistic frame of mind it's just because the pituitary gland is not secreting according to Hoyle, and every other pituitary you come in contact with immediately starts to cut up in sympathy. When the epidemic of pessimism becomes sufficiently general, everybody starts to tighten up, and the logical outcome is a depression. The possibility of any such catastrophe in the future was practically eliminated in 1939 by the discovery of Vitamin Q, which is apparently responsible for the correct functioning of this temperamental gland. So now, when we are threatened with pessimism we merely imbibe the juice of bitter almonds, which are rich in Vitamin Q, and the outlook at once becomes tinted with a pronounced rosy hue. It's quite simple."

"Uh huh," I remarked. "So was the Einstein Theory."

The Flight Begins

By this time we had arrived at the parking station, and here my credulity was subjected to another violent shock. I had expected to find a lot similar to those in which our cars accumulated dust back in 1932. But nothing of the sort. The old hitching post had come back into its own. There were no horses to be seen, however, and no automobiles either—just a flock of the cutest little planes nosing into the said hitching post, for all the world like a bunch of hummingbirds sipping nectar (or whatever it is that hummingbirds sip) from the bell-shaped devices to which they were tethered. And the thing that knocked me for the proverbial loop was that they all floated horizontally, like so many bespangled ladies in so many levitation experiments, with apparently not a thing to hold them in position. The air, however, was filled with a soft but powerful droning, which I was vainly trying to diagnose when Bill came to my rescue.

"These are the overhead propellers," he explained, "that keep the machines in their horizontal positions. They revolve so rapidly that they are quite invisible. You will realize the necessity for the other propellers when we get inside and get under way, and incidentally, I might tell you that the bell at the ship's nose is just a vacuum cup that holds it to the mooring mast. But come on, let's get going."

Propellers Unlimited

When he had paid the attendant his fee, Bill led the way to a small platform on which rested a cage, somewhat like the elevator cage that prevailed during my former incarnation. No sooner had we mounted this affair than it shot up into the air; then stopped right in front of a dinky little sport plane, into which through a side door we piled forthwith. It is hopeless for me to attempt to describe the intricate mechanism of this trim little craft. It sprouted gadgets from every conceivable angle, and had more attachments than a 1931 Los Angeles property owner. The thing had a regular propeller rash. They grew out all over it in a profusion of small shapes and designs that made me dizzy to contemplate, but I was soon to learn that every dingbat in the entire array had a specific function.

Pressing a few buttons here and there and yanking the odd lever, Bill yelled an O.K. to the attendant, who promptly released the vacuum bell, and we backed out into space as neat as you please. Another few gesticu-

lations from Bill and we rose, straight as a Texas preacher. Bill turned her nose towards Santa Fe Springs and we were off, with no more sense of motion than a watchman on his evening tour.

Over Santa Fe Springs

Up to this point I had remained positively speechless, which in itself was a novel experience for me, but finally coming out of my daze I ventured a look down towards the earth, and for all I could tell to the contrary we might have been flying over the domain of Mahatma Gandhi. It appeared to me that we must be mighty close to Santa Fe Springs, yet, although I seemed to recognize the old crossroads we used to call the "Four Corners," I could see nothing else that would remind me of the Santa Fe Springs I had known.

Before I had time to question my guide on the subject, however, he piped up voluntarily, "Well, do you remember the old place?"

"Is that Santa Fe Springs?" I asked.

"Nothing else but," he replied in his peculiar 1950 slang. "It has changed though, since you saw it last, hasn't it?"

"It sure has," I said. "Where are the derricks? Why, there used to be hundreds of them. Has the field been abandoned?"

"No," said Bill. "You recall, perhaps, the hullabaloo that started back in your time, when it was first discovered that the well holes were crooked, and you will also remember no doubt the pride we took in our eventual correction of the trouble. Well, we're not so fussy about drilling straight holes now. In fact, out of that experimentation was born a new practice—the scientific drilling of crooked holes. An entire lease may now be drilled in any diversity of directions, and to any number of depths from one single location by means of the rocket drill and directional radio control. This, of course, necessitates the use of only one drilling outfit; hence the disappearance of the old derrick forest that used to mark the Santa Fe Springs field."

No Pumps

"But surely," I ventured, "pumping through crooked holes is not a very economical proposition."

"Oh, we don't use pumps now," said Bill lightly. "We now raise the oil by a system known as the helium lift. You see, the gas from the flowing well is conducted first to a layout called the polymerization plant. There this gas, which is composed of hydrocarbons of comparatively high hydrogen content, is converted into a liquid consisting of hydrocarbons of a relatively lower hydrogen content, which is pumped through the regular oil lines with the crude oil stream to the refineries. During the process of polymerization, hydrogen is released, which is converted into helium and injected back into those wells which require artificial aid to produce. Helium, of course, is much lighter than the lightest petroleum gas and is non-inflammable, so that it is not only more efficient in lifting the oil, but also serves to reduce the hazards incident to its production."

No Storage, Even

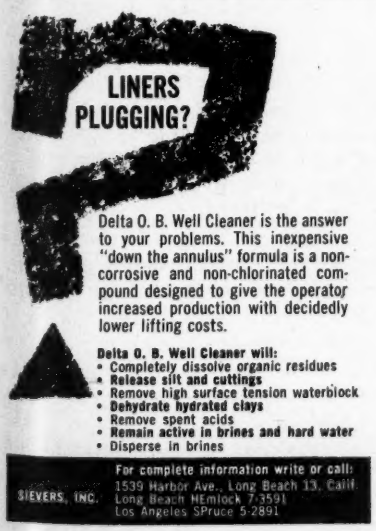
"And what about storage?" I inquired next.

"There isn't any," he replied. "We produce only as the refineries require the crude. Our entire system is so synchronized and controlled that we can shut down or open up the wells at will, and the production is measured directly from the well into the pipe line through thermostatic meters and automatic testing devices, which, of course, determine the quantity and certain simple essential quality factors of the oil. The actual refining processes, as you might expect, have also developed to an amazing degree during your retirement. By means of the three phenomena known as cracking, hydrogenation and polymerization, and modifications and combinations of these, our refineries are now able to manufacture from the same raw material an immense array of products ranging from the lightest and simplest of gases to the most complex and impenetrable of solids."

I could tell by this time from his actions that my mentor was preparing to descend. His hands were darting back and forth among the gadgets on the instrument board, as if he had suddenly become afflicted with St. Vitus's dance. For the minute we seemed to be merely hovering in space. Sure enough, however, we were presently settling quietly down into some obscure section of the Richfield district and I was looking forward to learning more of the wonderful developments in the oil industry.

The Adventure Ends

But at this moment, unfortunately, driven by sheer hunger, I ate all the pellets the doctor had left me without stopping to read the instructions on the package. To my dismay and ultimate physical distress, I found that I had eaten exactly a month's rations at one meal. The effect of this was to promote such a gastronomic disturbance that I have been a ward of the personnel department again ever since, and for the time being have lost all desire to further explore my new world.


LINERS PLUGGING?
Delta O. B. Well Cleaner is the answer to your problems. This inexpensive "down the annulus" formula is a non-corrosive and non-chlorinated compound designed to give the operator increased production with decidedly lower lifting costs.
Delta O. B. Well Cleaner will:
• Completely dissolve organic residues
• Release silt and cuttings
• Remove high surface tension waterblock
• Dehydrate hydrated clays
• Remove spent acids
• Remain active in brines and hard water
• Disperse in brines
For complete information write or call:
SIEVERS, INC.
1539 Harbor Ave., Long Beach 13, Calif.
Long Beach HEmlock 7-3591
Los Angeles SPruce 5-2891

Helium Spacing In Arizona

D. A. Jerome, executive secretary of the Arizona Oil and Gas Conservation Commission, has announced that an application has been filed by Kerr-McGee Oil Industries, Inc. for the creation of drilling units of 640 acres to 680 acres for the development and production of gas, including helium, in a pool in Apache County, Arizona.

Jerome announced this is the first spacing application for gas with high helium content in the state.

Confirm Humble-Monterey Negotiations

Humble Oil & Refining Company and Monterey Oil Company recently confirmed the fact that the two companies are engaged in negotiations looking toward the acquisition by Humble of the assets of Monterey.

GULF VICE PRESIDENT TELLS INDEPENDENT NATURAL GAS ASSOCIATION CONVENTION MEMBERS THAT DOMESTIC GAS SUPPLY IS LIMITED URGES ACCELERATED EXPLORATION AND PRODUCTION

David T. Searls Suggests Domestic Producers Form Committee to Cope With Urgent Demand-Supply Problem

David T. Searls, vice president and general counsel of Gulf Oil Corporation, told members of the Independent Natural Gas Association of America meeting at the Fontainebleu Hotel in Miami Beach, Florida, Oct. 3 that the tremendous increase in the demand for natural gas during the present decade must be met by new discoveries and increased drilling. He said that present drilling rates must be increased by 50 per cent if we are to obtain the supply of natural gas to meet the increased demand of the '60s, but he said that the producers cannot be expected to risk their money drilling such additional wells at the present field prices for natural gas. Searls also suggested the creation of a committee representative of producers, transmission companies, distributing utilities and consumers to estimate the increase in demand of natural gas and to determine expenditures which must be made by the producers within the next 10 years.

He said that despite present supplementary natural gas imports from Canada and Mexico, the strength of the U. S. natural gas business in the future is going to be determined by the strength of domestic gas supply.

Needs to Drill 625,000 Wells in 1960-1970 Decade

Searls admitted that the U. S. producing industry had made tremendous strides in the past 35 years by supplying the ever-increasing demands placed on its product. But he estimated the industry would have to transcend all previous efforts in the current decade by drilling 625,000 wells during the 1960-1970 period.

He pointed out that most of the known natural gas reserves were already committed under long-term contracts and could not be used to meet the expected increase in demand. He said that the consumers and governmental agencies must resolve the issue whether an increased price will be paid for an adequate supply of natural gas.

Searls cited the unchallenged testimony heard by the Federal Power Commission in the Phillips Petroleum Company case, which showed that the "reserve-production ratio" (the life in years of a natural gas supply) of 22 years existing in 1956 actually represented only a 14-year supply at the 1956 producing rate. From this information, "We would surmise that a reserve-production ratio of 15 years would probably mean full deliverability for only eight to ten years."

9.2 Billion Dollars Outlay Needed to Meet Minimum Forecasted Gas Consumption

Under this assumption, he said, it will be necessary to supply about 220 trillion cubic feet of gas for the next ten years. Of this amount, he thought it would be possible to secure 15 trillion c.f. from Canada and Mexico, leaving 205 trillion c.f. to be developed from domestic sources. And to meet this minimum forecasted gas consumption, he estimated that the industry would have to expend over 92 billion dollars to find, develop and produce it.

Natural Gas Priced Below Intrinsic Value

In estimating the revenue from the sales of oil and gas that would accrue to the producers during the 1960-1970 decade, Searls painted a bleak picture. He said that these revenues over the 10-year period, all before income taxes, were estimated to be 86 billion dollars for oil and 22 billion dollars for gas, or a total of 108 billion dollars in gross revenue. However, after deducting royalty owners' interest, the industry could expect about 92 billion dollars, he declared.

Searls pointed out there was only one solution to the unattractive climate for encouraging exploration.

"The price of gas—to the producer—must continue to increase until it approaches in some close proximity the price of competing fuels on an equivalent btu basis. . . . We are being forced to sell natural gas at a price below its intrinsic value and this is a condition that feeds upon itself. As long as the disparity in cost of energy between gas and other energy forms continues, the demand for gas is accelerated."

Urges Domestic Producers To Form Committee

Searls suggested a committee be appointed to represent all units of the natural gas industry and also the consumers through the regulatory agencies for the purpose of estimating the increase in demand of natural gas and determining the expenditure which must be made by the producers within the next ten years.

Additionally, he suggested that this group could ascertain the essential revenue to furnish the incentive for producers to make these expenditures.

The Gulf vice president called for the conclusions reached by the committee to be disseminated to all units in the industry and asked that all be cognizant of the pressure which is brought to bear on the FPC to hold the line as to natural gas prices and, therefore, collectively seek to remove that pressure so that the Commission can act free of this opposition and weigh the evidence in the light of the issues which determine what is best in the consumers' interest.

To get this information before the public, he suggested an educational program with State agencies, cities and consumer groups so that they might have a full understanding of the relationship between price and supply.

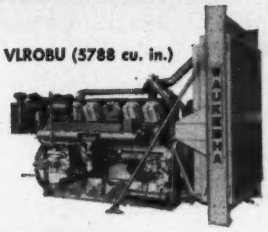
Statement by Borg-Warner Re Decision in Borg-Warner Corp. vs. York-Shipley, Inc.

Borg-Warner Corporation announces that it has appealed the adverse decision in its suit against York-Shipley, Inc. to restrain the latter from using the trademark and trade name "YORK" on certain products. Borg-Warner and its predecessors have used "YORK" as a trademark and trade name since prior to 1900.

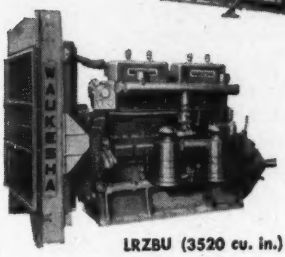
At the time Borg-Warner brought this action it was convinced of the necessity of protecting the public from confusion as to the source of goods as well as preserving its own rights. The appeal has been made to the United States Court of Appeals in Chicago. Borg-Warner is confident that the ultimate outcome of this appeal will be favorable and that its rights to its trademark and trade name "YORK" will be confirmed.

When you need a gas engine... buy a WAUKESHA "designed for gas" ENGINE

Need a gas engine? How can you pick a gas engine that's "tailor-made" for your needs? Get a Waukesha *designed-for-gas* engine! Then you can be sure—before you buy. Why? The Waukesha gas engine line is *complete*. You can get *exactly* the right engine to meet your needs. The Waukesha combination of *designed-for-gas—and* built-for-gas construction features, and first-quality materials—with low fuel and lubrication costs—is the result of over fifty years' experience in building fine engines. In oil fields all over the world *Waukesha* is the word and the buy-word for *dependable* full rated horsepower on gas fuel.



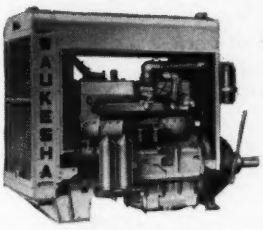
VLROBU (5788 cu. in.)



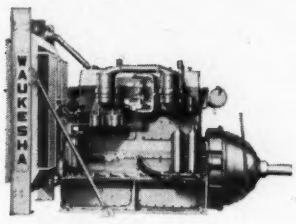
LRZBU (3520 cu. in.)

WAUKESHA MOTOR COMPANY
Waukesha, Wisconsin
New York • Tulsa • Los Angeles
Factories: Waukesha, Wisconsin and Clinton, Iowa

LOOK at this complete line of WAUKESHA *designed-for-gas* engines. Send for literature.



WAKCU (1197 cu. in.)



NKRBU (1905 cu. in.)

496-R

The ratings below are for standard engines without power consuming accessories

MEDIUM NATURAL GAS ENGINES					800	1000	1200	1400	1600	1800	2000	2200	2400	2600
ICK	4-A	2½x3⅛	61	36-1600	5	6	8	9	11	12	14	15	16	
FC	4-Ir	3¼x4	133	88-1200	12	16	20	23	26	28	30	31	31	31
180-GKB	4-AC	3⅜x3¾	155	112-1400	15	20	25	30	34	37	39	42	43	
XAH	4-Ir	3⅜x4½	186	120-1400	16	22	27	32	36	39	42	42		
190-GLB	6-A	3¾x4	265	192-1200	29	36	44	50	57	62	66	67	67	
195-GL	6-A	4 x4	302	214-1200	32	40	49	57	63	68	72	75	76	
195-GK	6-A	4½x4	320	217-1400	32	40	49	58	66	74	80	87	93	
135-GZ	6-A	4⅜x5	451	315-1200	48	60	72	83	93	103	112	118	122	
135-GZ	6-AV	4⅜x5	451	315-1200	48	60	72	83	93	103	112	118	122	
140-GZ	6-A	4⅜x5½	554	395-1000	60	75	90	104	116	127	136	144	149	
140-GZ	6-AV	4⅜x5½	554	395-1000	60	75	90	104	116	127	136	144	149	
140-GZ	6-AV†	4⅜x5½	554	453-800	69	86	102	117	132	145	157	167	175	
145-GZ	6-A	5⅜x6	817	597-800	91	113	135	155	174	191	205	219	230	
145-GZ	6-AV	5⅜x6	817	597-800	91	113	135	155	174	191	205	219	230	
145-GZ	6-AV†	5⅜x6	817	646-1000	98	123	147	170	193	214	233	249	264	
WAKC	6-AV	6¼x6½	1197	900-800	137	171	204	236	264	283				
WAKC	6-AV†	6¼x6½	1197	1038-800	158	193	226	258	288	315				

LARGE NATURAL GAS ENGINES					600	700	800	900	1000	1100	1200
NKRB	6-ACV	7 x8¼	1905	1505-600	172	197	220	244	266	286	306
NKRB	6-ACV†	7 x8¼	1905	1600-600	183	211	238	265	288	313	334
LRORB	6-ACV	8½x8½	2894	2270-800	252	300	346	385	420	445	464
LRORB	6-ACV†	8½x8½	2894	2341-800	260	310	357	402	443	478	508
LRZB	6-ACV	9⅜x8½	3250	2700-800	305	357	409	450	485	515	537
LRZB	6-ACV†	9⅜x8½	3250	2850-800	322	378	434	486	533	575	610
VLROB	12-ACV	8½x8½	5788	4590-600	524	601	672	743	807	859	890
VLROB	12-ACV†	8½x8½	5788	4985-700	562	665	753	835	911	978	1027

*FEATURES: 4, 6, 12—No. Cylinders; A—Aluminum Pistons; C—Counterbalanced; Ir—Cast Iron Pistons; V—Vibration Dampener.
†Special high compression ratios for higher horsepower and better economy to be fueled with dry methane type gas having a high heat value of 1150 BTU/cu. ft. or less.

Stepped Up Political and Economic Competition Seen Between Free and Communist World

American business can look forward to unprecedented competition in the next decade, both at home and abroad, David H. Dawson, a vice president of the Du Pont Company, said.

"There will be little room for the slow of step or the faint of heart in the 1960's," Mr. Dawson declared at the annual meeting of the Texas Mid-Continent Oil and Gas Association in San Antonio Sept. 21.

Dawson, who is a member of the executive committee of Du Pont and a member of the company's board of directors, said he looked for "vastly stepped-up competition, both political and economic, between the free world and the Communist world," which will have its effect on American business.

"With heavy surpluses in petroleum and other raw materials, Russia is increasing its economic pressures through government-to-government barter deals that feature price cutting and dumping. The fact that these arrangements are prompted more often than not by political rather than orthodox economic aims makes Russia's role and weight all the more difficult to assess or to counter."

United States business will also be faced in the 1960's with increasingly effective competition in our home markets from friendly industrial powers in Western Europe and from Japan, Mr. Dawson declared. Industry in these countries has been building new plant capacity as modern as ours, or more so, and it has been building for large markets, he added.

To meet rising competition from abroad, Mr. Dawson said, will require continued improvements in the productivity of our industries, and continued expansion of our productive capacity and our financial reserves.

"It means economic incentives to encourage individuals to work at the top of their talents, and financial incentives to stimulate the creation of new capital," he said. "It means we must continue to stimulate technological growth through encouragement of research at all levels."

Dawson warned that the economic struggle with Russia might be used as an argument for greater regulation of industry in this country. The scheme would be, he said, to "force" the growth of our economy to match that of Russia.

"Experience has shown that our economy flourishes when incentives for the individual to produce, invest, or innovate are at a maximum," he said. "Any hint of new and more rigorous government regulations, which lie at the root of the forced-growth arguments, can hardly create a mood of confidence in the American businessman."

Pointing out that our free business system has contributed in a major way to every material, social and cultural benefit that we know, Mr. Dawson declared that "undoubtedly there could be more dramatic advances in what has been called the public sector of our economy."

"But I am afraid some of these innovations will have to await a more perfect world. We are spending upwards of $40 billion a year to defend our nation and to assist our allies," he said. "This is a high price, but one which I am sure no American would question, when its payment means the survival of our way of life.

"It does, however, leave little room for the kind of experiment which, however attractive in the sociology classroom, will be regarded as icing on the cake by the majority of taxpayers. What can be done in these fields is dependent on the further logical growth of our economy."

Dawson suggested that the American businessman must be alert to and be prepared to take part in the worldwide ideological competition. What this means, he added, is that the businessman must be politically effective.

"It also means that we must plan intelligently and then speak out forcefully to communicate our general views on the important issues. It means we must remain true to our basic beliefs and not forsake them when it is temporarily expedient.

"As we enter this fateful decade, we find arrayed against us zealous, dedicated antagonists abroad, the prophets of the new feudalism. At home there continues to be a large body of opinion earnestly striving to dilute the strength of our free economy by seeking even more regulation, control, and fractionization of business.

"The times require an equal dedication from those who speak for freedom."

Secondary Recovery Pays Off

A $3 million, three-year gamble to recover additional oil from a semi-depleted West Texas oil field appears to be paying off for Mobil Oil Company.

Located 12 miles southwest of Midland, Tex., the project is Mobil's 5,900-acre Parks Field Unit, which was the industry's first major field-wide pressure maintenance program based on injection into the reservoir of propane (a liquefied petroleum gas) followed by dry gas.

R. D. Hanley, vice president of the Midland Exploration and Producing Division, termed the project a major engineering success, noting that oil production had increased from 325 to 1,700 barrels a day. He said the project is expected to "double the life of the field."

Since the project began in 1957, Mobil has pumped into the Parks Field Unit 64 million gallons of propane followed by 6½ billion cubic feet of gas. The propane front, with the high-pressure gas drive behind it, moves through the reservoir mixing with and pushing the oil ahead of it to producing wells.

A more common recovery operation is the injection of water. While less expensive, it is believed to be less efficient.

"With the propane-gas system followed by water injection we ultimately expect to recover about 55 per cent of the oil originally in place, compared to 17 per cent by primary production and an estimated 41 per cent by straight waterflooding," Mr. Hanley said. "This added production represents oil that otherwise might never be recovered."

The over-all recovery project will extend the life of the oil field from six to about 12 years.

Mobil Oil Company, an operating division of Socony Mobil Oil Company, Inc., is continuing to inject gas at the rate of 10 million cubic feet a day to maintain the necessary "push" behind the propane and oil.

95% Pure Oxygen Used in Oxidation of Hydrocarbons

Successful oxidation of hydrocarbons on a commercial basis using 95 per cent pure oxygen, rather than air, was reported at the 43rd National Meeting of the American Institute of Chemical Engineers in Tulsa last month. The process, said to be "the only one which has reached the stage of successful commercial development and exploitation," was described in a paper, "Hydrocarbon Oxidation with 95% Oxygen," prepared for delivery by James M. Robertson of Celanese Chemical Company, a division of Celanese Corporation of America.

The process increases the yield of chemicals from feedstocks such as propane and butane. These include formaldehyde, acetaldehyde, propionaldehydes, butyraldehydes, ethylene, propylene and butylene oxides, methanol, ethanol, propanols, butanols, acetone, methyl ethyl ketone and dimethyl acetal.

The controlled addition of oxygen atoms to hydrocarbon molecules was an important technique in organic synthesis "long before the term 'petrochemical' was coined," he said, adding that William Perkins was studying the oxidation of benzine and its derivatives in 1856 when he made the discovery which founded the coal tar industry.

The Celanese Corporation of America initiated a research program in 1932 to study the manufacture of oxygenated organic chemicals from petroleum hydrocarbons. It reached the pilot plant stage in 1941 and during the early days of the war "commercially feasible reaction conditions were established and construction of a full-scale plant was started in 1943 near Bishop, Tex. The plant went on stream in 1945. In 1947 it became necessary to increase the basic capacity of the hydrocarbon oxidation units and substitution of the 95% oxygen to replace air as the oxidation agent was decided upon for several reasons: capacity increase was achieved by replacing inert nitrogen with reactive hydrocarbon and oxygen. Elimination of nitrogen made it possible to attain more favorable reaction conditions which increase the yield or conversion efficiency of hydrocarbon raw materials to valuable products. Oxygen also eliminated restrictions on feedstocks that could be utilized.

"In addition to the increase in product yield per gallon of raw material consumed, the reduced formation of carbon oxides offers a significant secondary advantage," he said. "These degradation products must be removed from the system through the oil adsorption hydrocarbon recovery equipment. Since a smaller volume of nitrogen and carbon oxides passes through the oil adsorber, a smaller volume of propane is lost out of the top of this adsorber."

To finish the necessary oxygen, a 35-ton-per-day oxygen producing unit was constructed. Mr. Robertson admitted that the use of almost pure oxygen presented a safety problem," even though the reactant ratios are controlled so that the oxygen content of the bulk mixture is always below the lower explosive limit. In order that maximum safety in the plant operating area might be maintained, a rather elaborate mixing system has been developed."

S. O. of Calif. Consolidating All Chemical Interests

Oronite Chemical Company president T. G. Hughes revealed that Oronite will now be known as the Oronite Division of California Chemical Company.

The change results from a decision by Standard Oil Company of California, the parent firm, to expand further into chemicals. To facilitate this move, SO Cal is consolidating all of its chemical interests under one subsidiary, California Chemical Company.

Under the new arrangement, Oronite Chemical Company, SO Cal's industrial chemical organization, becomes the Oronite Division of California Chemical. The division will be headed by Mr. Hughes, an officer of Oronite Chemical since its formation in 1941 and its president for the past ten years.

Hughes stressed that the reorganization will not affect personnel or lines of communication with Oronite customers. The company will continue to market its complete product line of industrial chemicals and chemical intermediates.

Oronite, one of the major U. S. marketers of chemicals, is the world's largest supplier of xylene isomers, detergent alkylate and isophthalic acid as well as a leading marketer of many others, including lubricating oil additives, gas odorants, high temperature hydraulic fluids, phenol, acetone, phthalic anhydride and maleic anhydride.

Summary of District V Oil Industry Conditions August Preliminary 1960

By Oil Producers Agency of California

Weekly figures for August indicate that total supply was 1,424,000 B/D, demand was 1,417,000 B/D, and stocks increased 7,000 B/D. This increase, 217,000 barrels for the month, would bring total stocks to 117,830,000 barrels on August 31, compared with 131,627,000 on August 31, 1959. The year's decrease was 13,797,000 barrels.

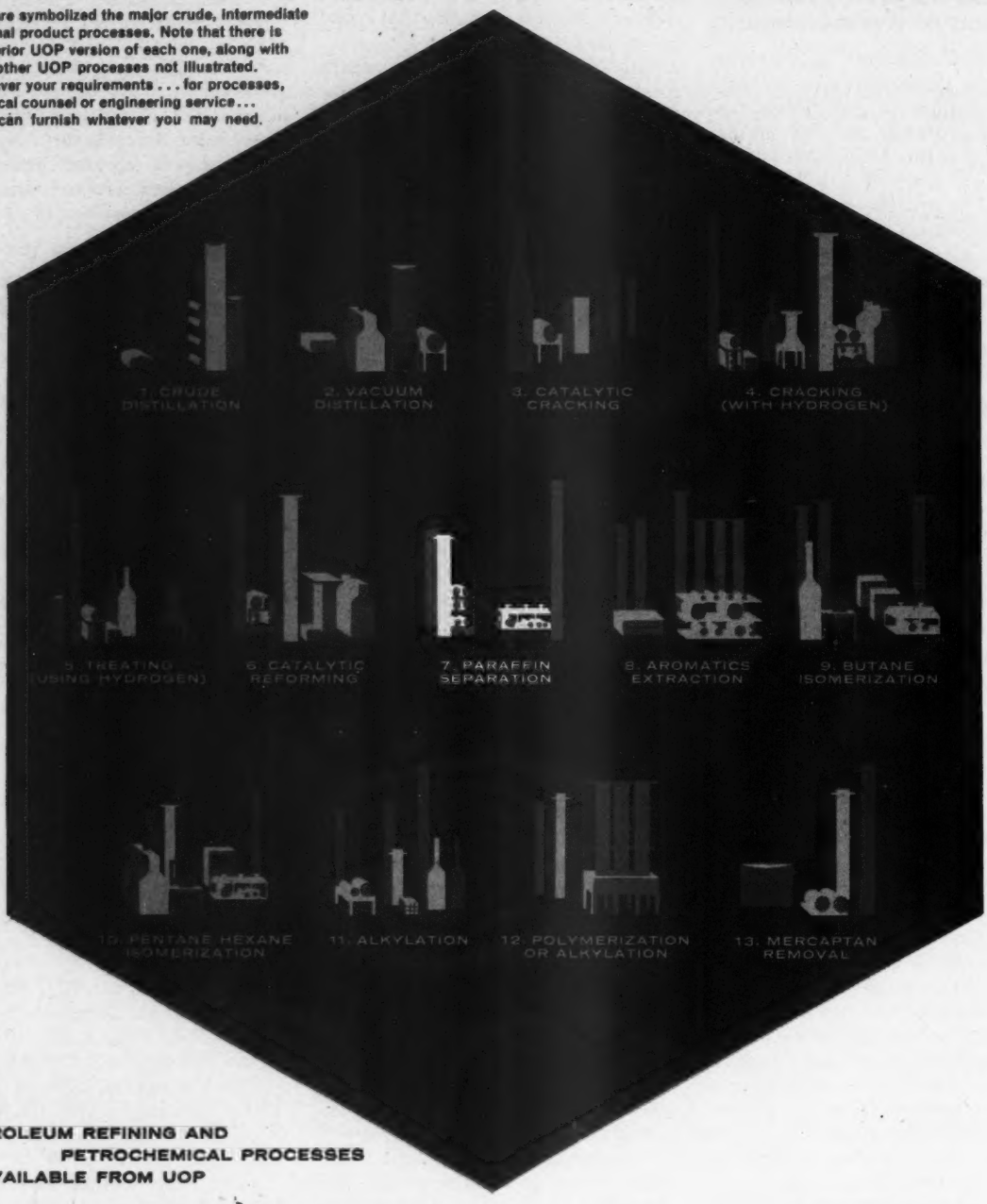
Weekly figures for August indicate that crude production was 830,000 B/D, imports were 329,000 B/D, and stocks decreased 11,000 B/D. This decrease, 341,000 barrels during the month, would bring stocks to 30,352,000 barrels on August 31, compared with 35,676,000 on August 31, 1959. The year's decrease was 5,324,000 barrels.

Preliminary figures for August indicate that gasoline supply was 575,000 B/D, demand was 648,000 B/D, and stocks decreased 73,000 B/D. This decrease, 2,263,000 barrels for the month, would bring gasoline stocks to 30,277,000 barrels on August 31, compared with 29,677,000 on August 31, 1959. The year's increase was 600,000 barrels.

Weekly figures indicate that distillate fuel supply was 198,000 B/D, demand was 174,000 B/D, and stocks increased 24,000 B/D in August. This increase, 744,000 barrels for the month, would bring stocks to 15,205,000 barrels on August 31, compared with 16,374,000 on August 31, 1959. The year's decrease was 1,169,000 barrels.

Preliminary figures for August indicate that residual fuel supply was 308,000 B/D, demand was 271,000 B/D, and stocks increased 37,000 B/D. This increase, 1,147,000 barrels for the month, would bring stocks to 15,924,000 barrels on August 31, compared with 27,289,000 on August 31, 1959. The year's decrease was 11,365,000 barrels.

Here are symbolized the major crude, intermediate and final product processes. Note that there is a superior UOP version of each one, along with eight other UOP processes not illustrated. Whatever your requirements . . . for processes, technical counsel or engineering service . . . UOP can furnish whatever you may need.



PETROLEUM REFINING AND PETROCHEMICAL PROCESSES AVAILABLE FROM UOP

1. CRUDE DISTILLATION equipment is designed and engineered by UOP in any desired capacity.

2. VACUUM DISTILLATION and **VISBREAKING**—easy-to-operate processes for preparation of feed stocks for catalytic cracking.

3. FLUID CATALYTIC CRACKING—an improved process that gives higher yields, higher octane numbers.

4. LOMAX™—highly flexible process that converts middle distillates and vacuum gas oils into gasolines and distillate fuels of outstanding quality.

5. UNIFINING™—a modern process that completely purifies petroleum distillates.

6. PLATFORMING® produces high octane gasolines, high purity aromatics.

7. MOLEX™—a new continuous separating process that removes lowest-grade hydrocarbons from gasoline.

8. UDEX®—the ideal process for separation of super-purity aromatics.

9. BUTAMER™—a new and practical process for producing isobutane.

10. PENEX®—a new process that converts light, normal paraffins to isoparaffins.

11. HF ALKYLATION—makes alkylate, top anti-rumble motor fuel. Sulfuric acid process also available.

12. CATALYTIC CONDENSATION—converts olefin fractions of refinery gases into high-quality gasoline and petrochemicals.

13. MEROX™—a new and inexpensive treating process to remove mercaptans from gasolines and light distillates.

PROCESSES NOT ILLUSTRATED:

REXFORMING®—the ideal process to insure your top octane position.

CATALYTIC DEHYDROGENATION—removes hydrogen from hydrocarbons to produce less-saturated hydrocarbons.

HYDEAL™—a new process for the hydrodealkylation of toluene or C_8 aromatics to produce benzene; may also be used for manufacturing phenol and naphthalene.

HYDRAR™—converts benzene to cyclohexane with excellent yields, achieves extreme high purity with Udex grade benzene.

OLEFIN EXTRACTION—efficiently separates olefins and diolefins from paraffins; prepares olefins for further conversion.

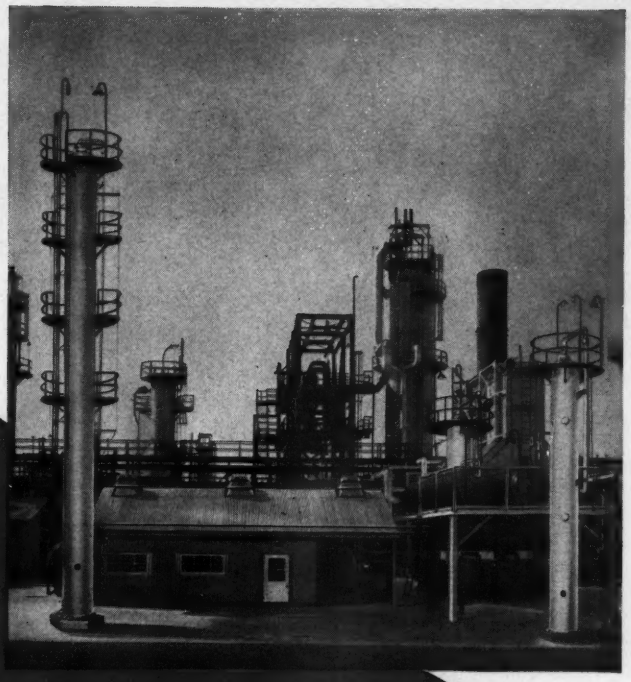
AROSORB™—removes heavier aromatics from synthetic and natural distillates, produces aromatic-free heavier distillates.

ALKAR™—produces ethylbenzene, cumene and other alkylated aromatics from Fluid Cat Cracker off-gas streams.

UNISOL®—an economical process for treating high mercaptan-containing gasolines.

MOLEX™—Until the advent of this new UOP process no kind of fractionation, separation or chemical conversion in commercial practice could completely remove the low-grade normal paraffins from gasoline. Yet this operation alone can raise research and motor octane numbers by as much as 5% to 14%. Complete and continuous removal of normal paraffins from gasoline is the function of the new UOP Molex process.

Readily incorporated into any existing refinery setup, Molex provides an economical means of increasing pool octane . . . at the same time producing normal paraffins which can be marketed as petrochemicals or as a superior jet fuel.



how to get more octanes plus . . .

Engine compression ratios, including those of the new "compact" cars, will continue to increase as the public demands more and more performance. And the demand for higher-octane fuels will grow. Naturally, most refiners want to increase their production of this higher-profit product. But in planning for such an improvement in your present refining facilities, *what else* do you aim to accomplish?

There are several UOP processes which will enable you to increase your production of higher-octane gasoline components. And many will give you an extra *plus* such as high-purity petrochemicals . . . much-needed high-quality jet fuel . . . top anti-rumble motor fuel. Thus the question becomes: What will be most advantageous for you to produce *in addition* to higher-octane motor fuel?

A UOP economic and market study will help you find the right answer. It will give you concrete evidence that points the way to your most effective next move.

Start now . . . plan for '62!

> INFORMED OPINION indicates that 1962 will require a substantial increase in process capacity . . . NOW is the time to start your planning! Ask us about a preliminary proposal . . . no obligation!

UOP

UNIVERSAL OIL PRODUCTS COMPANY

30 Algonquin Road, Des Plaines, Illinois, U. S. A.

WHERE RESEARCH TODAY
MEANS PROGRESS TOMORROW

> '62 COULD BE THE YEAR FOR YOU!

Personalities IN THE NEWS

Officers of Pacific Natural Gas Exploration Co. Announced

Election of **Grove Lawrence,** 35-year veteran in the natural gas business, as president of Pacific Natural Gas Exploration Co., newly formed gas exploration and development subsidiary of Pacific Lighting Corp., was announced this month.

Elected with Lawrence as officers of Pacific Natural Gas Exploration Co. were **Stuart T. Peeler,** as vice president and secretary; and **Harry L. Bosshard,** as treasurer and assistant secretary. Lawrence and Bosshard were elected directors, along with **Joseph D. Peeler.**

Bosshard previously was staff assistant in the treasury and tax department of Southern California Gas Co. Stuart T. Peeler and Joseph D. Peeler are attorneys with the Los Angeles law firm of Music, Peeler & Garrett.

Named field manager for the new company was **Thomas A. Johnson, Jr.,** formerly gas reserve engineer with Pacific Lighting Gas Supply Co.

Lawrence, a graduate of Stanford University, joined Southern California Gas Co. in August, 1925, as engineer at Taft. He rose through the ranks holding positions successively as superintendent of transmission; superintendent of production and transmission; general superintendent of gas manufacture, compression and storage; assistant to the vice president; and vice president. He was transferred as vice president to Pacific Lighting Gas Supply Co., effective March, 1958, and will continue to hold that post in addition to his new assignment.

Bosshard joined Southern California Gas Co. in April, 1943, as accountant. Subsequently he held positions of traveling auditor; division accountant; supervisor of general accounting; assistant general accounting supervisor; and staff assistant, in February, 1955. He is a graduate of U.C.L.A., with a degree in economics.

Johnson, a graduate of U.S.C., joined Southern California Gas Co. in August, 1954, as gas reserves engineer. He was transferred to Pacific Lighting Gas Supply Co. in the same capacity in March, 1958.

S. O. of Calif. Promotes William C. McCammon

William C. McCammon has been named vice president, supply and transportation, for Standard Oil Company of California, Western Operations, Inc., succeeding **Fred C. Loomis,** who moves to a key executive post in another Standard of California subsidiary.

W. C. McCammon

McCammon's appointment was effective October 1.

He will be responsible for coordination of crude supplies and transportation work in Socal's largest operating company. Western Operations, Inc., is responsible for all of the parent company's refining, producing, exploration and marketing functions in the eight western states.

A native of Coalinga, California, and graduate of the University of California, McCammon joined Standard in 1932 as a member of the company's manufacturing department. In 1938 he entered the comptroller's department and six years later was named assistant comptroller, serving in this capacity for 10 years.

In 1954 he was named assistant to the president of Standard Oil Company of California, a post he held until his present appointment. In this assignment he worked closely with all levels of management throughout the company in the establishment of policy and operating procedures.

C. A. "Cap" Phelan Retires

C. A. "Cap" Phelan, manager, fuel oil and liquid petroleum gas for the Shell Oil Company's Los Angeles Marketing Division, was honored recently (Sept. 22) by over one hundred of his business associates at a retirement luncheon held in Los Angeles at the Rodger Young Auditorium.

Phelan, retiring on September 30 after almost 38 years with Shell, was presented with a bench saw, mantle chime clock and other gifts by his fellow employees and friends.

Senior Research Physicist For S. O. of Calif.

Dr. L. H. Berryman, who recently joined the staff, has been appointed senior research physicist in the geophysics development section at the La Habra Laboratory.

Berryman received the Ph.D. degree in physics from the University of Oklahoma in 1950. He taught physics and conducted research at the University of North Carolina until 1954, when he joined Continental Oil Company to do geophysical research and development.

Photographed in the Trianon Room, Sheraton East Hotel, New York, N. Y.

The oilman: big hit in this year's fashion show.

Your wife might be surprised to know just how important your industry is to American women. You and oil helped develop oil-based synthetic fabrics dainty as lace, tough as overalls. Oil-based synthetic dyes that challenge the rainbow. Oil-based treatments that put new life into natural fabrics. The next time you hear somebody start to talk against the oil industry, tell him you're an oilman—and proud of it. And tell him why.

SHELL OIL COMPANY

News From Black, Sivalls & Bryson

Jim Lawrence has been transferred to Houston as sales engineer and **Jon Young** to Denver, according to **Edward W. Reif,** sales manager for the Controls Division of Black, Sivalls & Bryson, Inc.

Two new sales engineers have also been added to the controls sales organization—**Les Stillwell** at Los Angeles and **Jim Martin** at Borger, Texas.

Reif also announced the appointment of Du Alaska Company, Anchorage, and Honolulu Iron Works Company, Honolulu, as manufacturer's representatives for BS&B Controls, Safety Heads, and Tank Vents in the states of Alaska and Hawaii, respectively. The territory for Hudson Engineering Company, Birmingham, has been extended to include the entire state of Georgia for these same product lines.

Ross D. Randall Joins Annin As Manager of Engineering

Ross D. Randall has joined The Annin Company Division of The Worthington Corporation, Los Angeles, as manager of engineering, according to an announcement by **Earl E. Worner,** executive vice president.

Randall will head up the division's 32-man engineering staff engaged in product design and development of Annin's line of pneumatic-hydraulic and electro-hydraulic control valves and shut-off valves.

Promotions by S. O. of Calif.

E. F. Carlston has been promoted from senior research chemist to research associate in Chemicals Exploratory Research, Richmond Laboratory. He will continue to conduct exploratory research in polymer chemistry seeking new polymers and investigating their uses in the fields of plastics, surface coatings and fibers.

Carlston joined Cal Research in 1946 after several years experience in industrial and military work.

Dr. L. L. Ferstandig has been promoted from group supervisor to research associate in Chemicals Exploratory Research, Richmond Laboratory.

Dr. Ferstandig joined Cal Research in December, 1950. He has worked extensively in the field of polymerization, oxidation, aromatic amines and thermally induced free radical reactions of hydrocarbons.

Dr. C. J. Egan has been promoted from senior research chemist to research associate in physical chemistry at the Richmond Laboratory.

Egan has made many important scientific and technological contributions in hydrocarbon separation process fields such as selective absorption, solvent extraction, molecular compound formation, liquid-thermal diffusion and molecular sieve processing. He has also contributed significantly in the field of catalytic conversion processes. He joined Cal Research in 1945.

New Gulf Oil V.P. to Head U. S. Production Operations

Herbert F. Beardmore, 56, of Houston, was elected a vice president of Gulf Oil Corporation. He will be in charge of production operations in the U. S. with headquarters at Houston.

Beardmore succeeds **Robert L. Boggs,** who has announced his retirement from Gulf after 33 years of service, 22 of which were spent in foreign operations.

The new vice president has been manager of Gulf's Houston Production District since 1958. He was formerly vice president of production, Warren Petroleum Corporation, which became a wholly owned subsidiary of Gulf in 1956.

Beardmore has long been active in both the American Petroleum Institute and the Society of Petroleum Engineers of the AIME.

President of the Petroleum Club of Houston, Beardmore is also a member of River Oaks Country Club and the First Presbyterian Church of Houston.

American Chart Integrator for American strip charts and round charts.

NEW LITERATURE

Dowell Announces New Literature

Just off the press is a brochure, published by the Dowell Division of the Dow Chemical Company, on the use of flac as a fluid loss additive in cement. Much technical information is contained in the brochure, helpful to engineers in determining cement slurries of low cement loss characteristics.

A copy of the brochure is available by writing to Dowell Division of the Dow Chemical Company, P. O. Box 536, Tulsa, Okla.

A.P.I. Refinery Equipment Guide

The American Petroleum Institute's Division of Refining has announced publication of Chapter III, General Preliminary and Preparatory Work, of the "Guide for Inspection of Refinery Equipment."

The 24-page chapter covers scheduling, checking inspection tools and instruments, and preliminary work for major inspections.

Copies cost $1.00 each and may be obtained from the Publications Department, American Petroleum Institute, 1271 Avenue of the Americas, New York 20, N. Y.

American Meter Publishes Bulletin on Chart Integrator

Bulletin 419, just published by American Meter Company, provides complete details on the American Chart Integrator for interpretation of American Strip Charts and conventional round charts.

The new Chart Integrator provides three values from a single run. It not only computes the chart extension for differential and static pressure, but also provides read-out values for the average absolute static pressure and the average differential pressure.

Bulletin 419 also tells how the American Chart Integrator converts from use with strip charts to use with conventional round charts by means of a simple adaptor plate supplied with the instrument.

Copies of Bulletin 419 can be obtained from Advertising Department, American Meter Company, 920 Payne Ave., Erie, Pa.

When Buying Blowout Preventers

Why take *less* than

SHAFFER'S SPACE-SAVING COMPACTNESS?

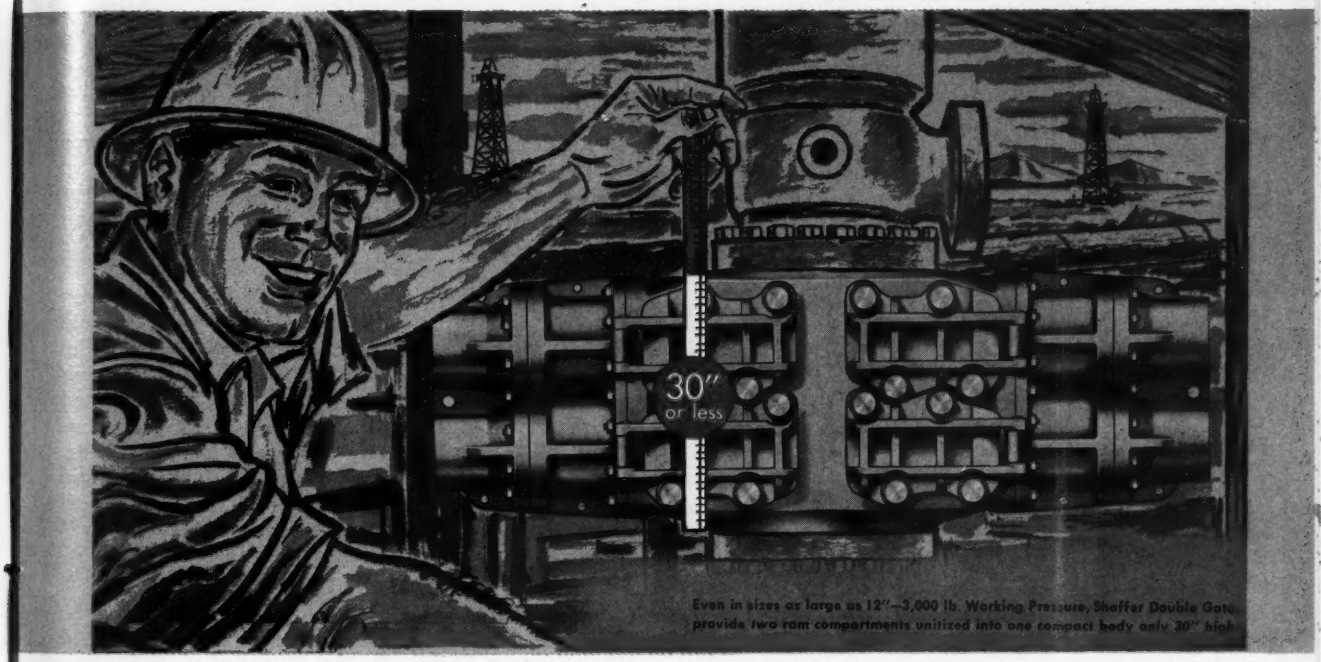
Whether you use cellars—or elevate your rigs—or use a combination of the two—every extra foot of under-rig space wastes money in increased rig-up costs and reduced operating efficiency. That's why it's doubly important to note the multiple ways Shaffer Blowout Preventers save space in your pressure control hook-ups...

1. ***Every Shaffer Gate uses flat rams that combine maximum sealing efficiency with minimum vertical height. Therefore, size for size, Shaffer Preventers are unsurpassed in their space-saving compactness!***

2. ***Shaffer "swing-open" doors for making ram changes further conserve vertical height by eliminating need for extra clearance above each preventer in order to change rams—extra clearance that is necessary where "top-access" ram design is used.***

3. ***Most Shaffer Preventers are available, not only in Single Gate designs, but also in Double Gate designs—two separate ram compartments unitized into one compact, space-saving body that eliminates need for spools and extra connecting flanges.***

RESULT: You make important *multiple* savings in vertical height requirements when you specify Shaffer Blowout Preventers!



Even in sizes as large as 12"—3,000 lb. Working Pressure, Shaffer Double Gate provide two ram compartments unitized into one compact body only 30" high

SPACE-SAVING COMPACTNESS is just one of many important advantages engineered into ALL FOUR types of Shaffer Blowout Preventers...

TYPE B for general drilling where the compactness of *non-rising* locking shafts is preferred!

TYPE E for general drilling where the quick ram indication of *rising* locking shafts is preferred!

TYPE XHP for extra-high-pressure drilling—to 15,000 PSI *Working* Pressure in 7-1/16" Bore Size... to 10,000 PSI *Working* Pressure in 9" and 11" Bore Sizes!

TYPE LWS for portable blowout prevention on quick in-and-out production jobs (weighs only 780 lbs. in 7-1/16" Bore Size)!

Why not get ALL the facts on the multiple advantages built into Shaffer Blowout Preventers? Write direct for helpful data—or see your nearest Shaffer representative!

37 years OF OIL TOOL LEADERSHIP

SHAFFER

HIGH PRESSURE DRILLING AND CONTROL EQUIPMENT • FISHING TOOLS THAT EXCEL

CALIFORNIA SERVICE SHOPS: Santa Fe Springs, Santa Maria, Ventura, Avenal, Bakersfield and Taft
HOUSTON, TEXAS, 6006 Navigation Blvd. • ODESSA, TEXAS, 1925 West Second Street
OKLAHOMA CITY, OKLAHOMA, Shaffer Tool Works, 6201 South Shields Boulevard
FARMINGTON, NEW MEXICO, Shaffer Tool Works, Post Office Box 546
CASPER, WYOMING, Shaffer Tool Works, Post Office Box 827
HOUMA, LOUISIANA, Shaffer Tool Works, Post Office Box 1788
EXPORT SALES OFFICE: Shaffer Tool Works, 500 Fifth Avenue, New York, N.Y., U.S.A.
IN CANADA: Shaffer Western Hemisphere, Inc., 5873 103A Street, Edmonton, Alberta.

New Pump Design By Peerless

Pumps, designed to permit effective control and regulation of huge volumes of water, is the subject of a newly issued bulletin by Peerless Pump, Hydrodynamics Division, Food Machinery and Chemical Corporation.

Tradenamed the "Hydro-Foil," these pumps are available in two types—one an axial flow propeller type pump and the other a mixed flow type pump. Both are available in single or multi-stage designs.

Ideally suited for numerous applications in dewatering, flood control, agricultural and industrial service, these giant pumps are capable of handling up to 220,000 gpm, with lifts ranging from 2 to 60 feet. Among the many advantages of the pumps are their ability to move liquids with minimum submergence, adaptation to shallower sumps, utilization of a variety of drives and installation in minmum space.

Complete details of each pump type, along with rendered sectional views of various component parts, are contained in Bulletin B-148.

Copies of this bulletin may be secured by writing to Peerless Pump, Hydrodynamics Division, Food Machinery and Chemical Corporation, 301 West Avenue 26, Los Angeles 31, California.

FPC Sets Area Price System

More than six years after the Supreme Court directed the Federal Power Commission to regulate prices paid to independent producers of natural gas, the Commission this week established maximum price schedules in 21 gas producing areas.

The statement listed maximum price levels for both existing service and new service. The lowest price set for new service was 12.7 cents per mcf in the San Juan Basin of New Mexico and the highest was 26.8 cents in West Virginia. In many areas of the West, including the Permian Basin of New Mexico, the maximum price which may be reached under existing contracts was pegged at 11 cents, although in 7 of 10 Texas districts the figure is 14 cents. Louisiana producers received a 13.7 cents ceiling on existing service and those in the San Juan Basin, Colorado and Wyoming will be held to 12.7 cents.

The Commission made it clear, however, that it expects its new area pricing program to be attacked in the courts in view of a U. S. Court of Appeals ruling which requires the FPC to use the conventional rate base method "at least as a point of departure."

"Slurry Oil" Yields Products Useful in Petrochemical Field

A report to the nation's chemical engineers in Tulsa last month revealed successful thermal "cracking" of "slurry oil" to produce a low-cost material for the production of olefins which play an important role as an intermediate in the petrochemical field "with end uses such as detergents, plasticizers, oxo-alcohols, lube oil additives and many other products."

The report, made by Raymond A. Franz, Lion Oil Company, a division of the Monsanto Chemical Company, El Dorado, Ark., said that the investigation is still in progress and many questions are yet unanswered."

In a paper, "The Production of Alpha-Olefins," presented at a symposium during the 43rd National Meeting of the American Institute of Chemical Engineers, Mr. Franz pointed out that wax cracking has been practiced for many years in Europe, "mainly because paraffin was a drug on the market." The olefins produced were separated by fractionation, reacted with sulfuric acid and finally with a caustic to give a detergent called Teepol, now produced in plants in England, Holland and France.

Paraffin wax, however, finds a ready market in the United States, where it is used in the milk carton business, hence it is too expensive to be used as a cracking stock.

"There is, however, a considerable amount of paraffins in the bottoms from catalytic crackers. This is sometimes referred to as heavy catalytic cycle oil or slurry oil. It usually contains about a 50-50 mixture of paraffins and aromatics. The paraffins may be readily separated from the aromatic fraction by solvent extraction and thereby serve as a low-cost raw material for the production of olefins."

Two Gas Companies Join To Develop Gas Reserves

Pacific Lighting Corp. has formed a new subsidiary to develop natural gas reserves—principally in the mid-continent and the Rocky Mountains—for future use in Southern California, where its three public utility subsidiaries operate.

In the announcement of formation of Pacific Natural Gas Exploration Co., Robert W. Miller, chairman of the board of Pacific Lighting Corp., said the new company will explore jointly for gas reserves with a subsidiary of Southern Union Gas Co.

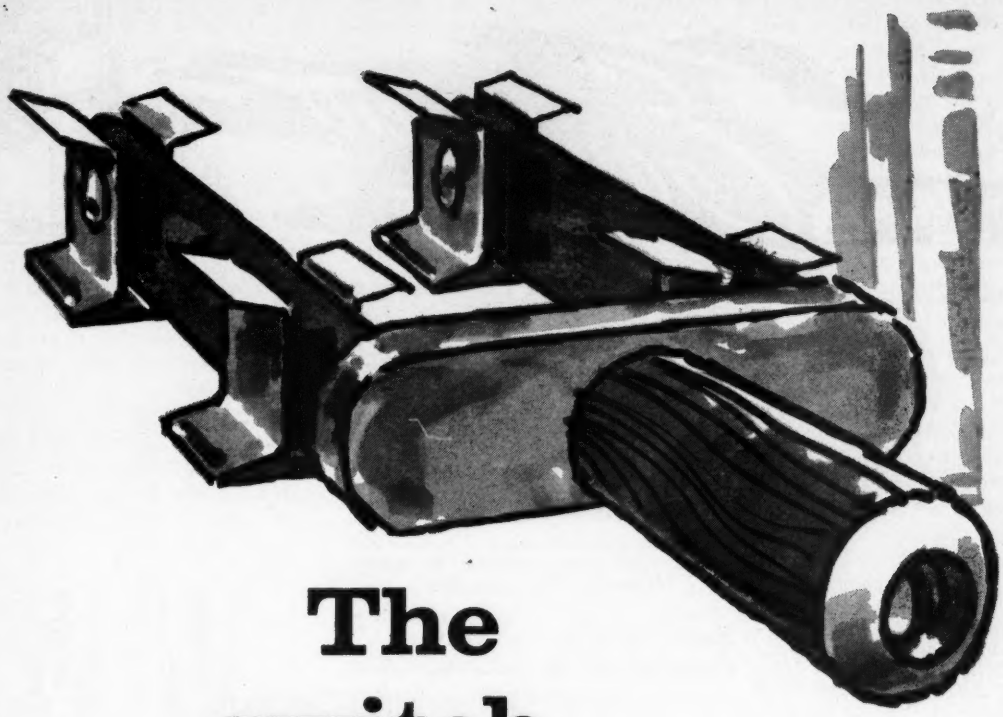
It is intended that production from any reserves developed will supplement long-term future supplies for the Southern California area.

"The present project is limited in scope and experimental in nature and probably will provide only a small part of Pacific Lighting's future requirements for gas," Miller said. "It is a step, however, toward the objective of having available gas reserves for use in later years to supplement the gas to be bought from El Paso Natural Gas Co. and Transwestern Pipeline Co.," he added.

The other three Pacific Lighting subsidiaries — Southern California Gas Co., Southern Counties Gas Co. of California, and Pacific Lighting Gas Supply Co.—form an integrated natural gas system serving more than 2,450,000 meters in 12 counties.

Pacific Natural Gas Exploration Co. is a California corporation with headquarters in Los Angeles. It will be wholly owned by Pacific Lighting Corp., and no public financing is expected.

Southern Union Production Co. will supply the bulk of manpower and technical services for the program, Miller said. The California company will own approximately half of all gas developed and approximately a quarter of the oil developed. In addition it will have preferential rights to buy any part of Southern Union's half of the gas production which will not be required by that company's parent, Southern Union Gas Co., to meet the demands of its own customers. Southern Union Gas Co. is a natural gas public utility engaged in distribution, transmission, and production in Arizona, Colorado, New Mexico, and Texas.



The switch is on...

to electric oil well pumps

The trend in Southern California oil fields is toward electric oil well pumps. Small wonder:

Electric Pumps are dependable—fewer moving parts reduce the chance of breakdown and require less maintenance.

Electric Pumps are safe—they eliminate the fire and explosion hazards of combustion engines.

Electric Pumps are economical—automatically controlled, they require less supervision and save you labor costs.

Electric Pumps are quiet—in a residential area, their silent operation contributes towards better community relations.

These are just some of the reasons why progressive oil producers in Southern California are switching to electric pumps. For the complete story, call any Edison office. One of our power consultants will be glad to furnish you details. There's no obligation, of course.

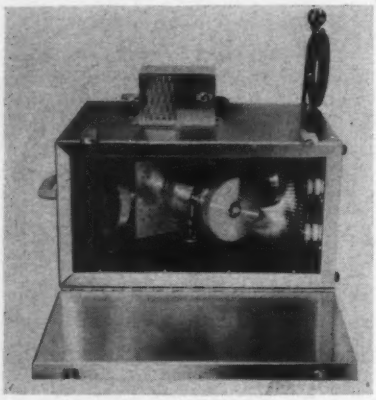
SOUTHERN CALIFORNIA Edison COMPANY

Portable Field Oven By Magcobar

A new Portable Field Oven has been developed by Magnet Cove Barium Corporation (Magcobar) to provide fast, accurate testing of drilling mud stability at high temperatures, Orien Van Dyke, Magcobar senior vice president, technical and production, announced recently.

Measuring 9½ x 15⅞ x 17 inches outside and 7 x 13 x 15 inches inside, and weighing only 46½ pounds, the new unit is ideal for use at the drilling site.

The oven can test two or four mud samples at one time. In testing, the samples are sealed in heavy-duty stainless steel containers and mounted in brackets on a rack which can be rotated at 32 RPM.



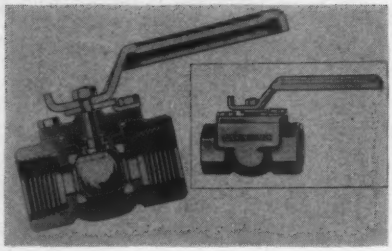
Magcobar's Portable Field Oven
William C. McCammon

A switch also permits testing of the mud without rotation.

Forced-air circulation in conjunction with the rotation of the mud samples provides uniform heating throughout the oven.

The oven can be wired for 7.5 amps. at 110 volts AC or 3.75 amps. at 220 volts AC without modification of any parts.

For additional information, write Equipment Department, Magnet Cove Barium Corporation, P. O. Box 6504, Houston 5, Texas.



Sectional and exterior views of the new Fig. 700 Ball Valve, just introduced by the Lunkenheimer Co., Cincinnati, Ohio.

New Fig. 700 Ball Valve Announced by Lunkenheimer

A new ball valve line, engineered for simplicity of design and maintenance-cutting operation, is being introduced by the Lunkenheimer Co. of Cincinnati.

Lunkenheimer Fig. 700 is being introduced in bronze body, screw ends, pipe sizes one-quarter to two inches, with Teflon or Buna-N seats and seals. It will be available rapidly in other materials.

The line is described by Lunkenheimer officials as the product of research to encompass all the advantages of ball valves generally, plus improvements over previous designs.

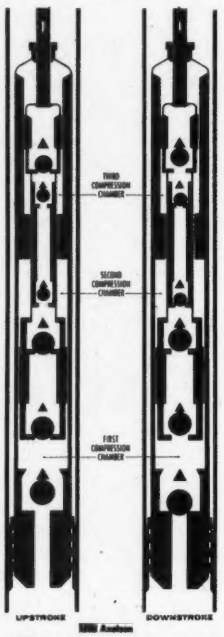
The top entry design feature makes possible easy in-line maintenance.

Fig. 700 has top entry through a removable cover. This exposes the ball, which is easily removed by the tool on the valve's specially designed handle. The ball is flat on both top and bottom, enabling it to be removed from the body for easy access to the seats in case they should need replacement — without breaking the pipe.

The self-aligning ball rides on its seats, sealing at high or low pressure without springs or bearings. O-Ring seals of Teflon or Buna-N protect against leakage at stem and cover.

Lunkenheimer has tested and proved the good features of ball valves—straight-through flow, low friction, smooth quarter turn operation, compactness — but continued development in order to offer an improved design that would not require frequent and impractical maintenance.

The company is readying a stainless steel line, with carbon steel to follow. All will incorporate the same design improvements as the bronze valve and will be available with flanged ends.



New "Three-Stage" Axelson Pump.

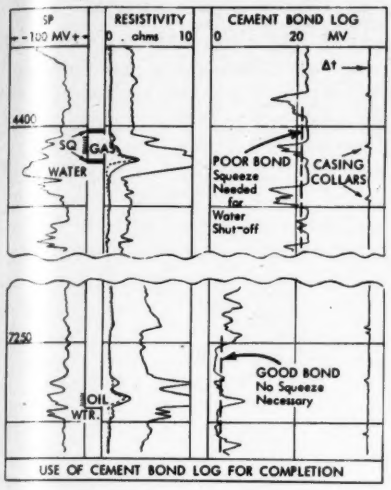
Axelson Introduces New Pump for Pumping High Gas-Oil Ratio Wells

Axelson Division of U. S. Industries, Inc., Los Angeles, has completed engineering and field testing of a new pump for producing high gas-oil ratio wells. The new "Three-Stage" Pump has proven to be highly successful in producing wells where gas lock may have prevented normal pump operation.

The principle of the new pump is similar to that of the Axelson Two-Stage Pump, with the exception of an additional compression chamber.

The lower two-thirds of the pump contains the first and second stages, as in the Axelson Two-Stage. The third-stage addition offers several additional advantages.

In effect, the pump incorporates the same principles used in the three-stage compressor.



Schlumberger Cement Bond Log

New Schlumberger Log Checks Casing Cement Job

The Schlumberger Cement Bond Log presents for the first time a recording of the quality of the casing cement job. The operation of the new service is based on the fact that the energy of a sonic pulse transmitted along a casing diminishes rapidly where the casing is bonded to material, such as hardened cement, which has a sonic velocity much lower than that of the casing. By pointing to intervals where bonding is incomplete, even lacking entirely, the log indicates channeling and gaps in the cement column which require squeezing. At the same time, by denoting effectively cemented zones, the log saves the cost of many squeeze jobs formerly run to insure shut-off before testing.

Schlumberger engineers state that the log may be run at any time after the cement has set. In wells being worked over due to water production, the Cement Bond Log points out the probable sources of the water where caused by bad cementation. This information alone often enables profitable recompletion.

The Cement Bond Log can be run simultaneously with the Gamma Ray Log for correlation with open hole logs.

New Line of Tubingless Completion Equipment

Baker Oil Tools, Inc. is offering a wide line of tubingless completion equipment for all phases of oil well completion, production, and workover.

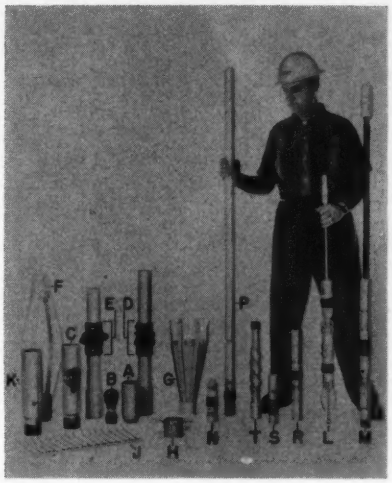
For primary cementing, the Baker Full-Flow Tubing Guide Shoe (A) can be made full-opening by pumping a ball to the shoe and applying pressure to shear the guide out of the shoe. The shoe is usually run with the full-flow tubing fill-up collar (not shown) with cementing plug, which contains a drillable baffle plate that acts as a plug seat for the cementing and back-pressure plug (B). The Tubing Cement Float Collar (C) utilizes the famous Baker ball-type back-pressure valve for floating and cementing just as a regular float collar does in conventional casing strings. The Turbulizer (D) reduces channeling when cementing multiple tubingless completions by spacing the tubing strings apart so that cement will flow evenly around each tubing string (a larger OD version (E) for use on single strings is available).

The Tubing Centralizer (F) centers the tubing to provide a uniform cementing space. The metal petal basket (G) serves as a bridge during cementing jobs to protect lower formations. The Wall Scratcher (H), available with either 2½ or 4½ in. long wires, provides maximum removal of mud cake from the wall of the hole in the area to be cemented, with minimum removal of mud while running in. A rotating-type wall scratcher (J) is also available. The "TC" Stage Cementing Collar (K), which consists of only two pieces and is operated entirely by rotation, makes stage cementing operations possible in tubingless completions.

Primary Cementing Equipment not illustrated includes the Baker Tubing Cement Float Shoe, the Tubing Cement Guide Shoe and the Baker Triplex Cementing Shoe.

For remedial and stimulation work, the Retrievable Tubing Bridge Plug (L) is a dependable, leakproof, yet retrievable plug that can hold pressure from either above or below. It may be used either alone or as a straddle tool in conjunction with the Retrievable Casing Packer (M), a set-down packer that has an integral long-stroke circulation joint and is available in both single-grip and double-grip versions as a squeeze tool or production packer. The Wire Line Bridge Plug (N), similar in design to the popular conventional-size bridge plug, is completely drillable and is set by the Wire Line Pressure Actuator (P).

The completion and production line includes the Retainer Production Packer (R), which is based on the design of the conventional-size Baker Retainer Production Packer and features, for tubingless completions, the same versatile, high-performance qualities. The Locator Seal Nipple (S), which is made up on the bottom of the tubing string, seats in the packer sealing bore, providing a leakproof seal.



Not illustrated but available for completion and production work are the Baker Invertible Packer, which may be run either as a set-down or a tension packer; the Baker Casing Pump Packer, which performs the dual function of anchoring the pump and packing off the casing, and the Tension Tubing Anchor, which eliminates breathing and buckling by securely anchoring the tubing string after it has been placed in proper tension from the surface.

The Tubing Scraper (T) has a new design to provide more cutting edge and more coverage, and the spiral design provides a track through which the cuttings and scrapings may be washed up.

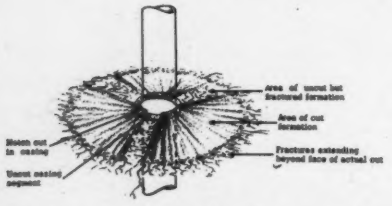
For more information about Baker Tubingless Completion Equipment, ask for Technical Bulletin No. 378.

New Triple Frac-Notch Cutter Developed by McCullough

A new fracture initiation tool, the Triple Frac-Notch Cutter, has recently been developed by McCullough Tool Company. In field operations, in hard sandstone and limestone formations, it has proved exceptionally efficient.

The Triple Frac-Notch Cutter operates on an electric wire line. It makes three separate notch cuts simultaneously on one run of the tool. Each notch cuts through casing and cement and cuts and fractures up to 15 inches into the surrounding formation.

The three notches are cut on a horizontal plane at the same depth in the well. A strong, solid segment of uncut casing is left between each notch. The uncut formation between the notches is fractured by the powerful action of the improved cutting process. Thus, the application of hydraulic fracturing pressure gives the effect of full circle fracturing. This gives the operator the same results as obtained by McCullough's full circle tool, the Frac-Notch Cutter, which has proved so successful in Colorado, Illinois, Kansas, Kentucky, Michigan, Montana, Nebraska, Oklahoma, Utah, West Texas, West Virginia and Wyoming.



Triple Frac-Notch Cutter surface test showing position of two of the three notch cuts. Note that the uncut casing segment between the notches is strong and solid. This is one of a series of tests made in casing set in seven day neat cement in a 55-gallon drum.

The enormous power of the new cutting process notches into the formation and also fractures the formation for some distance beyond the face of the actual cut. Because the fracturing process is started even before the application of hydraulic pressure, the initial formation breakdown requires lower hydraulic fracturing pressure, and the formation usually takes a greater amount of propping material at a faster rate. A larger area of formation is more effectively fractured. This new notching process makes it possible to get up to 100 times more effective fracturing power in some formations.

Illustration of the cutting action of the new McCullough Triple Frac-Notch Cutter. Note that the casing is not severed, yet the application of hydraulic fracturing pressure in the triple-notched area will give full circle fracturing on a horizontal plane.

Use of this new notching device can help improve production as much as 30 times. Placement of the notch cut exactly where the fracture is desired and concentration of hydraulic power in the notch results in greatly increased flow capacity of the fractured formation. Not more than two notches are needed in a 10-foot zone.

The Triple Frac-Notch Cutter, as well as the Frac-Notch Cutter, is an electric wire line tool requiring very little rig time to accomplish the notch cut. Also, it provides extreme accuracy in placement of the notch. Additional economy is realized since it is usually run on the same Service Unit set-up immediately following collar and radioactivity logging for correlation and depth control.

The Triple Frac-Notch Cutter is available for use in 2″, 2½″, 3″ and 3½″ tubing and in casing sizes ranging from 4½″ OD through 7″ OD.

Monarch Opens Tulsa Warehouse

Monarch Engineering Corp., manufacturer of sub-surface oil well pumps, announces the establishment of its new warehouse in Tulsa, Oklahoma, as a distributing point for the Mid-Continent area. In conjunction, F. C. "Bo" Cummings has joined the Monarch organization as manager of Mid-Continent Dealer Sales.

This is in line with the company's sales and service expansion program which recently has resulted in new field service points being established in Taft, Coalinga and the L.A. Basin in California, and also in Odessa, Texas, and Hobbs, New Mexico.

New Method Reported For Recovering Liquids From Natural Gas

A "very promising" method for recovering petroleum products from natural gas has been developed, four Phillips Petroleum Company engineers revealed.

The method is a "new short cycle adsorption" process, "which makes it profitable to treat gas containing as little as 0.1 gallon of liquid per 1000 cu. ft." G. H. Dale, D. M. Haskell, H. E. Keeling and L. A. Warzel, of Bartlesville, Okla., reported in a paper, "Dynamic Adsorption of Isobutane and Isopentane on Silica Gel," presented during the 43rd National Meeting of the American Institute of Chemical Engineers in New York last month.

Gas field discoveries in recent years have been yielding "progressively drier gas" which is leaner in natural gas liquids, they pointed out, and "it becomes increasingly difficult to treat gas economically by oil adsorption when the gas contains less than 0.4 to 0.3 gallon of pentane plus liquids per 1000 cu. ft. The increasing value of natural gas liquids has prompted improved recovery methods.

"A very promising one, the short cycle adsorption unit, has been developed, which makes it profitable to treat gas containing as little as 0.1 gallon of liquid per 1000 cu. ft. We have had adsorption processes for years; however, the new chamber design with internally insulated bed makes it practical to heat up and cool down in a matter of minutes. This then makes it possible to get good recoveries of low concentration materials using relatively small units. The unit consists of two adsorption towers, a furnace to supply hot stripping gas, a gas pump to circulate the hot gas, and heat exchangers to cool and condense the material stripped from the bed."

The "key to the whole project," they reported, is an on-stream chromatographic analyzer.

REMIND YOUR CUSTOMERS YOU'RE NOT TO BLAME FOR HIGH GASOLINE TAXES!

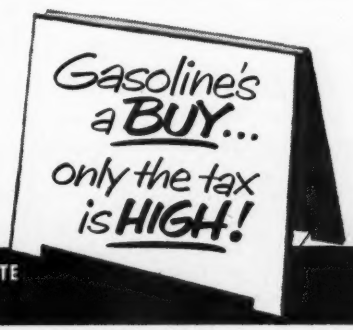
It's the anniversary of the latest temporary Federal gasoline tax increase!

On October 1st, one year ago, the *temporary* 1¢ increase in the Federal gasoline tax went into effect making the total Federal tax 4¢ a gallon. That's why October is an excellent time for you to remind your customers that you're not to blame for high gasoline taxes. Tell them, too, that Congress promised that this temporary tax increase would expire on June 30th 1961, and the Federal tax revert to 3¢ a gallon.

Here are the facts about high gasoline taxes that your customers should know:

- **Motorists pay about one dollar in taxes on every ten gallons of gasoline they buy!**
- **The gasoline tax rate is five times as high as the tax on luxuries like diamonds and mink coats!**
- **Motorists now pay about a 50% sales tax on gasoline!**

Don't take the blame for high gasoline taxes . . . Give your customers the facts! Remember—October is the anniversary of the *temporary* 1¢ Federal gasoline tax increase. *You can help* to make sure that it is only *temporary!*



COMMITTEE ON PUBLIC AFFAIRS OF THE AMERICAN PETROLEUM INSTITUTE
1271 AVENUE OF THE AMERICAS, NEW YORK 20, NEW YORK

Field Development

LOS ANGELES BASIN

Cheviot Hills Completion

Signal Oil and Gas Company completed Signal-Richfield-Rancho No. 7 flowing 400 b/d oil from a total depth of 10,257 feet and a redrilled depth of 10,004 feet. Seven-inch casing is cemented at 9918 feet. The completion is located near the intersection of Pico Bouleard and Kerwood Place in the northwest quarter of Section 36-1s-15w. Signal-Richfield-Rancho No. 9-1, also in Section 36, resumed operations and is cleaning out to redrill. The well has been standing suspended at a total depth of 10,693 feet.

Beverly Hills Completion

Signal Oil and Gas Company completed Signal-Richfield-Olympic Community No. 2 flowing 490 b/d of 24.7 gravity clean oil from a total depth of 8000 feet. Seven-inch casing is cemented at 7800 feet. The completion is located near the intersection of Pico Boulevard and Peg Place in Section 25-1s-15w. Signal-Richfield-Hillcrest No. 6, located in Section 25-1s-15w, will be reworked. It was previously completed from a total depth of 10,175 feet.

Signal Oil and Gas Company, as operator for itself and Richfield Oil Corporation, now has a current daily oil production of 5200 b/d and 18,000 mcf of gas per day from 16 wells in the Westside residential area. Production to date since October, 1958, is 1,200,000 barrels of oil and 4 billion cubic feet of gas.

Salt Lake Field Development

Buttram Petroleum Corp. has awarded a contract to K. L. Kellogg & Sons to drill five wells on its property west of the Farmers Market near the intersection of 1st Street and Stanley Ave. Rotary is being moved in to commence drilling Gilmore No. 4 located in Section 21-1s-14w.

Inglewood Well to Redrill

Standard Oil Company has taken over the abandoned Buckler Community No. 1 well from Humble Oil Refining Company and will redrill the hole. Located in the southwest quarter of Section 16-2s-14w on the southeast plunge of the Inglewood Field, the well was drilled and abandoned by Humble at a total depth of 13,516 feet. Several tests were run and at the present time a string of 5½" casing is cemented at 10,061 feet.

Brea-Olinda Development

Shell Oil Company has staked locations for five new wells in the field. Columbia Nos. 48, 50, and 51 are located on Section 8-3s-9w, and Puente No. C-35 and C-36 are located in Section 34-2s-10w.

NORTHERN CALIFORNIA

Universal New Gas Discovery

Universal Consolidated Oil Company completed Rheem-Hammer No. 1 as a new gas field discovery flowing 3100 mcf of gas per day through a 24/64" bean and was shut in. Gas sand was logged in the interval 2315-2338 feet and after cementing 5½" casing at 2410 feet, casing was perforated from 2315-2328 feet. Located in the southwest quarter of Section 5-17n-1w in Colusa County, the discovery was drilled to a total depth of 3490 feet, and failing to log showings in the lower portion of the hole, plugged back and cemented casing. The area has been named the Catfish Bend Field and is approximately 7000 feet northeast of the Compton Landing Gas Field.

Table Bluff Gas Test

Zephyr Oil Company is preparing to drill its fourth gas test in the area, Leon Oro Blanco No. T-4. Located in the northeast quarter of Section 35-4n-2w in Humboldt County, the well will be a 4750 foot test. Two gas producers in the area are shut in.

San Joaquin County Completion

In the Vernalis Gas Field, Porter Sesnon et al and Great Basins Petroleum Co. completed Sesnon-Vernalis Unit 2 No. 33A-22 as a dual completion flowing 8775 mcf of gas per day through a 3/8" bean and 11,000 mcf of gas per day through a ½" bean for a total of 19,575 mcf. Flow is from five sands in the Azevedo and Blewett Zones. Located in the northwest quarter of Section 22-3s-6e, the well was drilled to a total depth of 5200 feet and cemented 5½" casing at 4299 feet.

Kern County Land Wildcat

Kern County Land Company is preparing rig site for KCY-McCulloch-Delta Unit No. 2-A, a Contra Costa County wildcat located in the northeast quarter of Section 13-2n-3e. The test will be drilled to about 5000 feet and is four miles southeast of the Rio Vista Gas Field.

New Gas Discovery

Western Gulf Oil Company has an apparent new gas discovery in Goff-Erdman No. 1 located 3½ miles east of the Buckeye Gas Field. Present depth of the well is 9522 feet and logs are being run. However, on a formation test of the interval 7503-7546 feet the well flowed at a 5000 mcf of gas per day rate. The well is located in the southwest quarter of Section 15-13n-1e in Colusa County.

Tehama County Test Abandoned

Seven miles north of the town of Red Bluff, Humble Oil & Refining Company drilled to a total depth of 5000 feet on Ida Copper Wahl No. 1 and after running logs abandoned the test. The well was a Stratigraphic test, located in the northwest quarter of Section 17-28n-3w.

Socony Mobil Gas Test

Socony Mobil Oil Company, Inc. has staked location for Socony Mobil et al Section 10 Unit No. 1 in the northeast quarter of Section 10-10n-1e in Yolo County. The well will be a 9500 foot test.

McDonald Island Test

Pacific Gas & Electric Company is completing arrangements for a

deep test in the McDonald Island area. Location has not yet been surveyed for the 10,000 foot test.

Yolo County Gas Test

D. C. Basolo, Jr., with offices at 228 World Trade Building in San Francisco, is drilling below 4875 feet on R. M. Bell Community No. 1 located in the southeast quarter of Section 9-9n-1e. The well is located 8 miles north of the Winters Gas Field and will be drilled to about 5200 feet.

Red Bluff Test

Peter W. Hummel and Edward D. Neuhoff, Operators, are preparing to drill Pendleton No. 1 on Section 8-27n-4w in Tehama County. This location falls about 1½ miles southwest of their recently abandoned J. F. Nielson No. 1 well which drilled to a total depth of 5478 feet.

COASTAL AREA

Naples Offshore Discovery

Phillips Petroleum Company completed Phillips Petroleum-Pauley et al-State 2205 E. T. No. 5 on projected Section 2-4n-30w as a new field discovery. Total depth is 8871 feet with 7" casing cemented at 8858 feet. No further information has been released. The company has announced location for well No. 7 on projected Section 2-4n-30w and Loffland Bros. has the drilling contract.

Texaco Inc. Abandonment

Texaco Inc. drilled to a total depth of 1907 feet on Tichenor No. 1 and after running logs and sidewall sampling, abandoned the well. The test was located in the La Honda area, one-half mile north of production on the northeast quarter of Section 21-7s-4w in San Mateo County.

San Mateo County Abandonment

Neaves Petroleum Developments abandoned Neaves-Bettencourt No. 1 without testing after drilling to a total depth of 3456 feet. The test was located five miles northwest of the La Honda field in the southwest quarter of Section 26-6s-5w.

Four Wells for Standard

Standard Oil Company has staked locations for four development wells in the West Montalvo Field. McGrath 4 No. 1113 and Patterson Ranch 1 No. 1017 will be drilled in Section 36-2n-23w. McGrath 4 No. 1210 will be drilled in Section 35-2n-23w and McGrath 5 No. 913 will be drilled in the northwest quarter of Section 36-2n-23w.

Santa Maria Development Well

Signal Oil and Gas Company is grading location for Rice No. 5, a field development well on the north flank of the field. The well is located in the northeast quarter of Section 23-10n-34w.

M. J. M. & M. Test

M. J. M. & M. Oil Company is grading rig site for Fortune-Bradley No. 5-6 located in the northwest quarter of Section 5-9n-33w.

Standard Offshore Test

Offshore from Gaviota in Santa Barbara County, Standard Oil Company is preparing to drill Standard-Humble-Gaviota State No. 6. Location for the test falls in the southwest quarter of projected Section 35-4n-32w.

Ventura County Completion

Texaco Inc. completed Shiells No. 202 flowing 565 b/d of 31.8 gravity oil with a cut of 25 per cent through a 24/64" bean and 243 mcf per day of gas. The completion was drilled

HILLMAN-KELLEY

first in POWER TONG EQUIPMENT

Hydraulic **POWER TUBING TONG***

Hydraulic **POWER CASING TONG***

Hydraulic **POWER SUCKER ROD WRENCH***

**Also available for air operation*

WRITE FOR DESCRIPTIVE BROCHURE

HILLMAN-KELLEY

Main Office & Plant: 1000 Macy St., Los Angeles 33, California
Division Office: 5959 Clinton Drive, Houston 20, Texas
Branch Offices: Odessa, Texas • Oklahoma City, Okla. • Lafayette, La. Shreveport, La. • Corpus Christi, Texas • Ventura, Calif. • Bakersfield, Calif.

to a total depth of 15,221 feet and redrilled to 7310 feet and cemented 5½" casing at 7161 feet. The well is located in the northwest quarter of Section 4-3n-19w.

SAN JOAQUIN VALLEY

Shale Point Wildcat Gas Test

Daniel W. Elliott, Jr., Operator, is drilling below 1000 feet on Elliott-Scherrer No. 47-36 located in the southwest quarter of Section 36-26s-18e, approximately 13 miles west of the Lost Hills Field. A location for a second test, Elliott-Scherrer No. 47X-36, has been staked due east of the west quarter corner of Section 36-26s-18e, northwest of the Scherrer gas production.

Wheeler Ridge Completion

Richfield Oil Corp. completed KCL-L No. 65-25 flowing 210 b/d of 56 gravity oil cutting 0.5 per cent through a 15/64" bean. Flow was from the perforated interval 8788-8535 feet. Located to the west of the Windgap area in the southeast quarter of Section 25-11n-20w, the completion was drilled to a total depth of 8937 feet and plugged back to 8790 feet. 7" casing is cemented at 8533 feet.

Gulf Development Well

Western Gulf Oil Company has staked location for I. M. Woodward-USL No. 12, a field development well, in the northeast quarter of Section 21-11n-23w in the Santiago Field.

Tulare County Wildcat

Harry H. Magee, Operator, is grading location for Smith No. 1, a wildcat test in the northeast quarter of Section 30-24s-23e. The test is located 2000 feet southwest of the Trico Gas Field production.

McDonald Anticline Test

Luard Corporation has staked location for Theta-Luard No. 1 to be drilled in the southeast quarter of Section 20-28s-20e. The test is 1000 feet southeast of present production.

Texaco Wildcat Test

Texaco Inc. is grading roads and rig site for Bonner No. 1 located in the southwest quarter of Section 22-26s-22e. The wildcat test is four miles northwest of the Buttonwillow Gas Field.

Tejon Completion For Richfield

Richfield Oil Corp. completed Tejon-A No. 49-31, a westerly edge well, flowing 230 b/d of 20.0 gravity oil with a 0.5 per cent cut through an 18/64" bean. Flow was from the perforated interval 5395-5463 feet. The well is located in the southeast quarter of Section 31-11n-19w and was completed from a redrilled depth of 5465 feet and a total depth of 5550 feet. 7" casing is cemented at 5389 feet.

Coles Levee Completion

Richfield Oil Corp. completed C.L.-A No. 55-29 flowing 239 b/d of 37.2 gravity oil with a cut of 3.4 per cent through a 16/64" bean from the interval 9198-9350 feet. The completion is located in the southeast quarter of Section 29-30s-25e and was drilled to a total depth of 9350 feet. 7" casing is cemented at 9198 feet. A location is being graded for C.L.-A No. 75-29, also located in the southeast quarter of Section 29-30s-25e.

Texaco Outpost Test

Texaco Inc. is drilling below 1500 feet on CWOD No. C-1 located in the southeast quarter of Section 35-31s-22e. The well is an outpost test of the Midway-Sunset Field.

North Tejon Outpost Abandoned

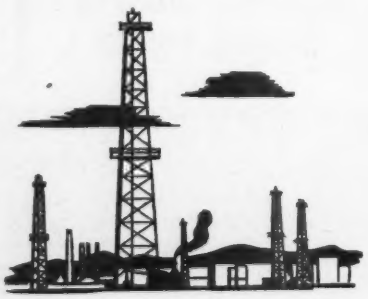
Reserve Oil & Gas Company abandoned R.S.T. No. 18-29 at a total depth of 8930 feet and a redrilled depth of 8819 feet, without testing. Located in the southwest quarter of Section 29-11n-19w, the well was an easterly test of the JV pool.

McKittrick Shallow Test

J. Paul Sievers has staked a location for Townsite No. 3, a shallow wildcat test in the McKittrick area. Location for the well falls in the northwest quarter of Section 21-30s-22e.

Two Round Mountain Tests

Shell Oil Company has staked locations for two semi-wildcat tests in the field. Midway between the Main Area and Pyramid Area of the Round Mountain field, a location has been staked for Olcese Two No. 43X-21 in the northwest quarter of Section 21-28s-29e. Olcese No. 77X-16 will be drilled in the southeast quarter of Section 16-28s-29e on the southeast edge of the Pyramid Area.



San Emidio Nose Outpost

Richfield Oil Corp. is grading roads and rig site for KCL-H No. 21-15 located in the northwest quarter of Section 15-11n-21w. The location falls 2000 feet southeast of present production.

Three Buena Vista Tests

Standard Oil Company has staked locations for two wells and graded a third well. No. 85-29B located in the southeast quarter of Section 29-31s-23e is drilling below 3500 feet. Location for Well No. 14-15B is in the northwest quarter of Section 15-31s-23e, and for well No. 43-29B in the northwest quarter of Section 29-31s-23e.

Six Signal Development Wells

Signal Oil and Gas Company has staked locations for 6 development wells in the Midway-Sunset field. Well No. 101 will be drilled in the northwest quarter of Section 6-11n-23w. Metson No. 57-24, No. 117-24 and No. 127-24 will be drilled in the southwest quarter of Section 24-11n-23w. Signal Nos. 13 and 14 are located in the northeast quarter of Section 35-32s-23e.

OTHER AREAS

Alaska

Halbouty Alaska Oil Company completed Halbouty-Alaska No. 1-B as a new gas field discovery flowing 80,000 mcf per day from the interval 5202-4992 feet. 28 feet of gas sand was logged in the interval. Above the interval tested there are three untested gas sands back of the 7" casing cemented at 8650 feet. Located in the southwest quarter of Section 21-6n-9w in the West Fork area, the well was drilled to a total depth of 14,020 feet and plugged back to 8700 feet.

Two miles east of their gas discovery well on the Kenai Unit, Union Oil Company of Calif. and The Ohio Oil Company are preparing rig site for Kenai Unit No. 13-4 located in the southeast quarter of Section 4-4n-11w S. B. & M.

Union Oil Company and The Ohio

Oil Company will drill two tests in the Knik Arm area 18 miles northwest of the town of Anchorage. Surface casing has been set on Knik Arm No. 1 located in the northeast quarter of Section 2-16n-4w S. B. & M., and rig site is being prepared for Knik Arm No. 2 in the northeast quarter of Section 5-16n-3w.

Arizona

Eastern Petroleum Company completed three gas wells in Apache County, each of the wells having an 8 per cent helium content. State No. 1-23, located in the southeast quarter of Section 28-20n-26e, drilled to a total depth of 1091 feet and was completed from the perforations 1000-937 feet flowing 3500 mcf of gas per day. In the southwest quarter of Section 2-19n-26e, State No. 1-2 was completed at a total depth of 1054 feet flowing 4008 mcf of gas per day. State No. 1-10, located in the northeast quarter of Section 10-19n-26e, was good for 100 mcf of gas from a total depth of 1035 feet.

The Superior Oil Company is grading rig site for Navajo No. M-23-21 located in the southwest quarter of Section 21-41n-20w at Carrizo Mountain in Apache County. The well will be a 6600 foot Devonian test and is one mile south of the company's recent completion, Navajo No. 14-16 good for 12,500 mcf per day gas and 100 b/d of 64 gravity distillate.

Key Petroleum Exploration Company has staked a location for Key No. 1-C in the northeast quarter of Section 5-21s-24e in Cochise County. The wildcat will be a 6800 foot test and is 15 miles north of Bisbee.

Colorado

The California Company has staked a location for Lebanon No. 1 in the southwest quarter of Section 20-38n-15w. Located in the Paradox Basin in Western Colorado, the well will be a Devonian test.

Montana

A triple completion was made in the Ivanhoe Dome Field by the Champlin Oil & Refining Company on NPRR No. 3 located in the northwest quarter of Section 17-11n-31e in Musselshell County. From the Amsden perforations 3461-3466 feet, flow was 95 b/d oil and from the Tyler-A Sand perforations 3956-3968 feet flow was 63 b/d oil. The well flowed 22 b/d water from the Tyler-B Sand perforations 4029-4033 feet. The completion was drilled to a total depth of 4202 feet and cemented 5½" casing at 4200 feet.

Honolulu Oil Corp. completed Stenvad No. 25-15, an easterly outpost, flowing 760 b/d clean oil through a ½" bean from the Tyler-C Sand perforations 4620-4570 feet. Located in the southeast quarter of Section 25-11n-30e, the completion was drilled to a total depth of 4706 feet and cemented 7" casing at 4700 feet. Top of the Heath was logged at 4653 feet.

New Mexico

Benson, Montin and Greer Drilling Company completed Jones No. 6 flowing 156 b/d oil from the Gallup perforations 5754-5684 feet. Flow was through an 18/64" bean. Located in the northeast quarter of Section 17-28n-13w in San Juan County, the well was drilled to a total depth of 5824 feet and cemented 5½" casing at 5821 feet. Top of the Gallup was logged at 5334 feet.

La Plata Gathering System completed San Juan No. 32-5, its Rio Arriba County wildcat, flowing dually from the Mesaverde and Dakota. Flow from the Dakota interval 7846-7993 feet was 3389 mcf of gas through a ¾" bean and 4177 mcf per day gas from the Mesaverde interval 5436-5760 feet. Located in the northeast quarter of Section 26-32n-6w, the completion was drilled to a total depth of 8067 feet.

North Dakota

Texaco Inc.'s Govt.-Pace No. 1 continues to pump test and is recovering 105 b/d oil from the Heath perforations 8146-8140 feet and casing notches at 8174 feet and 8154 feet. The test is located in the northwest quarter of Section 14-146n-101w in McKenzie County. Also in McKenzie County, Texaco Inc. has staked a location for Govt. No. A-2 (NCT-1) in the northeast quarter of Section 14-145n-101w. The well will be a 9565 foot Madison test.

Two miles south of the Rough Rider area, Shell Oil Co. and Northern Pacific Railway Co. drilled to a total depth of 9480 feet and has abandoned N.P. No. 14-35-1. Located in the southwest quarter of Section 35-145n-101w, water was recovered from the Madison.

Utah

Century Drilling Co. has staked a

B and W Inc.
SCRATCHERS AND CENTRALIZERS
for a good cement job

CHANNELING
is defined as . . .

CHAN'NEL.ING 1. To form a channel in; to groove. 2. To convey into or through a channel or channels. 3. Oil Well Drilling. In well cementing, a condition resulting from incomplete removal of fluid, gelled mud and filter cake from behind the casing by the ascending cement slurry.

CHANNELING MEANS . . .
(1) An imperfect primary cement job
(2) Mud left behind the casing
(3) Expensive squeezing
(4) A poor completion

B and W
SCRATCHERS AND CENTRALIZERS
Your best and most economical insurance for the elimination of channeling and a good primary cement job.

B and W Inc.
Well Completion Specialists
GULF COAST
Box 5266
Houston 12, Texas
PHONE WAlnut 3-6603
WEST COAST
19706 South Normandie Ave.
Torrance, California
PHONE FAculty 1-2463
146

location for Johnson Creek Unit No. 5, a San Juan County wildcat, in the northwest quarter of Section 18-36s-22e. The well will test the Paradox at about 6150 feet and is 20 miles northwest of the Hatch Field.

Humble Oil & Refining Co. is preparing to drill Bridger Jack Unit No. 1 in the southeast quarter of Section 17-27s-22e in San Juan County. The location is about 26 miles northwest of the Lisbon field and will test the Cambrian at 8500 feet. This is the first test on the 23,000-acre Bridger Jack Unit south of the town of Moab.

Texaco Inc. has announced a location for Unit No. 6 in the northeast quarter of Section 32-27s-15e in Wayne County. The wildcat is on the Nequoia Arch Unit and will be a pre-Cambrian test.

Pubco Petroleum Company's Lisbon-Federal No. 1, Lisbon extension test, drilled to a total depth of 9162 feet and is cementing casing to test the Mississippian. Muddy salt water was recovered from the McCracken interval 9162-9038 feet. The Mississippian, topped at 8420 feet, logged about 350 feet of good showings and on open hole tests flowed 6000 mcf gas, and 56 barrels per hour condensate. The test is located in the southwest quarter of Section 12-30s-24e in San Juan County, two miles southeast of production.

Wyoming

Pan American Petroleum Company has staked a location for Knisley-USA No. 1, an outpost test, in the southwest quarter of Section 18-23n-88w in Carbon County. The location is one mile north and west of Sinclair Oil & Gas Company's Cole Springs Draw discovery recently completed from the Sundance perforations 2746-2706 feet flowing 8150 mcf of gas per day. Pan American's well will be a 2700 foot Nugget test.

Gulf Oil Company is ready to spud State Line Unit No. 9, an outpost test one mile northeast of State Line Unit No. 8 completed for 4650 mcf of gas per day through an 18/64" choke. Well No. 9 is located in the southwest quarter of Section 3-12n-94w in Sweetwater County, and will be a 5600 foot Fort Union test.

Continental Oil Company is running a drill stem test on its Laney Rim wildcat test located in the northwest quarter of Section 29-18n-97w in Sweetwater County. Present depth of the test is 9085 feet. The test is three miles southeast of Fable Rock and logged top of the Almond at 8974 feet.

After running a successful open hole test, resulting in a flow of 15 barrels of oil per hour, U. S. Smelting Refining and Mining Company has cemented casing at 6153 feet on Kummerfield No. 4-32. Flow was from the Dakota interval 6111-6154 feet and the high flow pressure was 2217 psi. Location of the test is in the southwest quarter of Section 32-51n-68w in Crooks County.

Pacific Oil and Gas Development Corp. and True Oil Co. have staked location for two wells to be drilled immediately in the Coyote Creek Oil Field, Powder River Basin. They are located in Sections 3 and 10, Township 48 North, Range 68 West, and offset excellent producing wells. Production here is had from Dakota Sands encountered at approximately 6600 feet.

A COMPLETE PACKAGE

Development of Welex's Acoustic Velocity Log adds a sparkling new service to the Welex Simplified Logging Program.

Formerly effective in 90 percent of today's wells,Welex's Simplified Program, with the addition of the Acoustic Velocity Log, now can give the best answers available in EVERY WELL—even the more complex, difficult-to-analyze wells.

The Acoustic Velocity Log accurately determines porosity by measuring the velocity of sound traversing formations. It also is useful to geophysicists for interpretation of seismic records.

As with the Welex FoRxo and Neutron Logs, porosity values can be read directly off the Welex Acoustic Velocity Log. When run in conjunction with the Welex Induction or Guard Log, the most important question—WILL THE WELL PRODUCE?—can be answered in minutes by use of the Simplified Interpretation Charts, or "pigtails," printed right on the log.

Most effective in formations with intergranular porosity, the Welex Acoustic Velocity Log can be run jointly with a self potential curve, gamma ray curve or caliper log for correlation purposes.

Next time and every time call your nearest Welex representative for the complete package of logging services that will answer the most important question—WILL THE WELL PRODUCE?

WELEX, INC.

General Offices: 1400 East Berry, Fort Worth, Texas
In Canada: Welex of Canada, Ltd.

Crest Instruments and Pure Oil Sign Agreement

Crest Instruments, 11808 South Bloomfield Ave., Santa Fe Springs, Calif., a division of Magna Products, has signed an exclusive agreement with the Pure Oil Company to manufacture and sell corrosion measuring equipment under Pure's patents.

Pure's corrosion meter, which provides an accurate means of measuring the rate of corrosion in all types of equipment under varying conditions, was developed by three engineers at the company's Crystal Lake, Ill., Research Center. They are Glenn Marsh, Edward Schaschl, and Lynn Ellison. These men, widely known in their field, will provide close technical liaison and engineering counsel to Crest Instruments.

In commenting on the new association, Mr. Marsh, head of Pure's corrosion research activities, said: "We are gratified to be working with a company devoted exclusively to the relatively new technology of corrosion measurement and control. By licensing its patents to Crest, the Pure Oil Company is making available to general industry scientific knowledge gained through years of independent research."

Ed. Goff, division manager of Crest, said that all users of Crest's Corro-dex equipment would be given prompt service and liberal trade-in terms for the new and improved measuring instruments that will be made available under the Pure Oil patents. He invited Corro-dex users to write Crest Instruments for specific information.

Upgrading Petroleum Stocks Called Challenging Engineering Problem

Conversion of petroleum residues to products of greater value was called "one of the most challenging problems facing process development engineers."

Methods for converting these residues were discussed in two papers at a refinery symposium during the 43rd National Meeting of the American Institute of Chemical Engineers in Tulsa September 26.

Challenge of the problem was outlined by H. Beuther, J. B. McKinley and R. A. Flinn of the Gulf Research & Development Company, Pittsburgh, Pa., in a paper, "Recent Developments in the Technology of Residue Processing."

"A number of promising techniques have been developed" to upgrade residues, they reported. Some of the techniques, including hydrogenation, have been applied; "others are on the verge of application."

"It appears that both thermal and catalytic techniques will be used as conversion mechanisms and that the selective separation of the more desirable residue components may find application prior to catalytic conversion. Of the catalytic techniques, hydrogenation shows the greatest flexibility. It seems likely that the continued demand for higher product quality along with the economic need to obtain more valuable products from every barrel of crude will result in an increased application of hydrogenation throughout the refinery."

A companion paper, "Hydrogenation by the H-Oil Process," described a method for the upgrading of heavy petroleum stocks. It was authored by M. C. Chervenak and C. A. Johnson, of Hydrocarbon Research, Inc., New York.

YOUR BEST BUY!

For 40 years we've said it but we'll say it again—JENSEN JACKS are your best buy!

They work longer with less down time—pump more oil for less money.

Why? Because their simple, functional design is based on sound engineering principles and the use of the right modern materials in the right places.

Get the facts on JENSENS before you equip that next well—no matter how deep it is or where.

STOCKED BY YOUR LOCAL SUPPLY STORE

Made by JENSEN BROS. MFG. CO., INC., P. O. Box 477-D, Coffeyville, Kansas

Export Office: 250 Park Avenue, New York 17, N. Y.

JENSEN JACKS

THIS LAUGH

OFF!!

A barber surveyed the slick hair of the young man who had just seated himself in his chair. Then he asked:

"Do you want it cut or should I just change the oil?"

The recruit complained to the sergeant that he'd got a splinter in his finger.

"Ya should have more sinse," was the harsh comment, "than to scratch your head."

A Texan was dictating his will: "To my son I leave three million dollars—and he's lucky I didn't cut him off entirely."

"Has your husband given up golf?"

"Yes, but he still uses the same language when changing tires."

After months at sea, the sailor hit port and headed for the nearest tavern. Pointing to a patron who lay prone on the floor, he instructed the barkeep, "Give me a shot of that."

Son: "Pop, I got a lickin' in school today and it's your fault."

Pop: "How's that, son?"

Son: "Remember when I asked you how much a million dollars was?"

Pop: "Yes, I remember."

Son: "Well, a 'helluva lot' was not the right answer."

Professor: "What happens when a body is immersed in water?"

Coed: "The telephone rings."

Life is an everlasting struggle to keep money coming in and teeth and hair from coming out!

Displaying her wedding gifts, the bride came to one from the groom's army buddy. "I just adore these personalized gifts," she said. "We received towels and washcloths with HIS and HERS on them, but," she blushed, "this is even more personal." And she fingered an olive drab blanket with the letters US stamped in the middle.

Marcella: "You've been stenographer for nearly all the big shots in this department, haven't you?"

Beverly: "Yes, I'm just about on my last lap now."

Salesman: "These shirts are made of very strong material, sir. They just laugh at the laundry."

Customer: "Yes, I know all about that kind. I had some of 'em come back with their sides split."

DON'T FORGET

WESTERN OIL AND GAS ASSOCIATION

WILDCAT HI-JINKS

December 6, 1960

Hollywood Palladium

For Reservations Call

MAdison 4-6386

A Wonderful Gift Note!

MAKE BEAUTIFUL MUSIC WITH AMERICA'S FINEST BOURBON!

Lift the lid of this handsome Chinese red and gold reproduction of an Early-American music box and the strains of "My Old Kentucky Home" fill the air with tinkling cheer. A splendid setting for Kentucky's very best premium Bourbon—Old Kentucky Tavern—aged 8 full years and Bottled-in-Bond.

A gift to decorate the most tastefully appointed home and worth the price for its contents alone: a fifth of 'Tavern,' two gold-rimmed Old-Fashioned glasses and a matching 2-ounce jigger. On sale at better liquor dealers. In Southern California, call Bradshaw 2-5606, Beverly Hills, for further information or a personal demonstration.

OLD KENTUCKY TAVERN

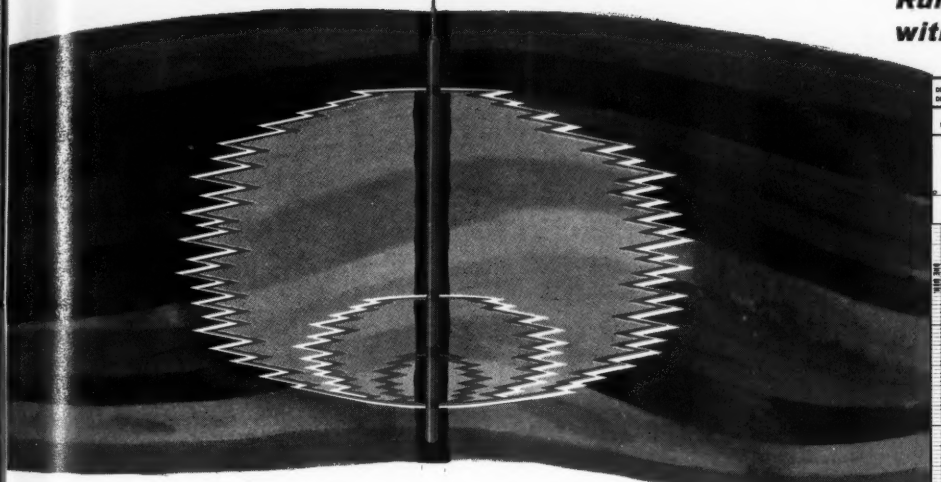
100 PROOF BOTTLED-IN-BOND.

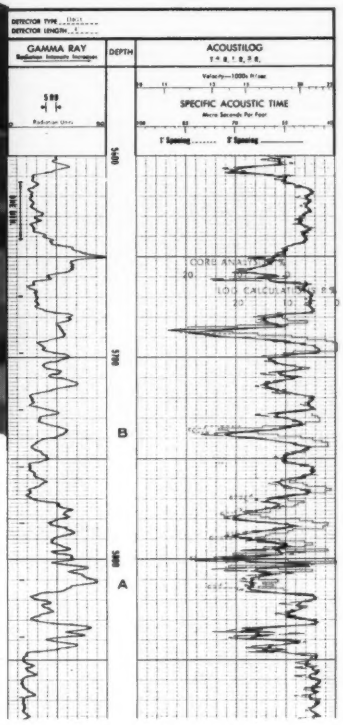
KENTUCKY STRAIGHT BOURBON WHISKEY, GLENMORE DISTILLERIES COMPANY "WHERE PERFECTION OF PRODUCT IS TRADITION." LOUISVILLE, KENTUCKY.

Another FIRST by LANE-WELLS

DUAL SPACED ACOUSTILOG*

Run SIMULTANEOUSLY with Gamma Ray or SP





Lane-Wells Dual Spaced Acoustilog is the most accurate, most meaningful, most informative, quickest run log of this type available anywhere. All new instruments, offered exclusively by Lane-Wells, make it possible to run both 1′ and 3′ spacing curves plus either a self potential or a gamma ray curve all on one trip into the well.

Provides Most Meaningful, Most Accurate FORMATION EVALUATION

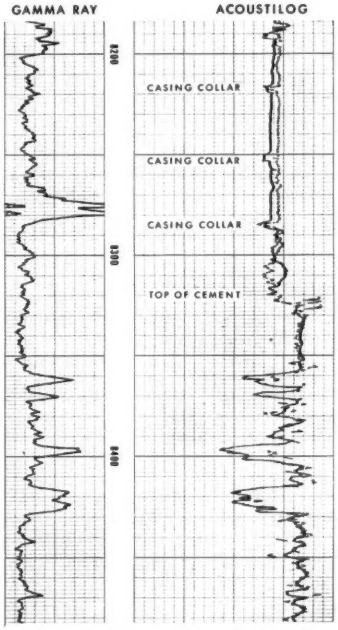
MOST MEANINGFUL!—Because both the 1′ and 3′ curves are recorded while the instrument is in the same position in the borehole, the differences in readings are significant and reliable. Porosities may be read accurately directly from the log. **MOST ACCURATE!** — Exclusive design and circuitry features of Lane-Wells Dual Spaced Acoustilog enable it to measure sound velocities within ±2% of known formation velocities.

PLUS-CEMENT LOCATION

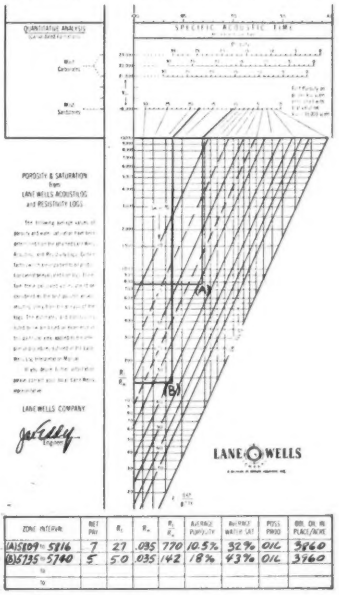
Dual Spaced ACOUSTILOGS have proved remarkably valuable in locating cement and channeling behind casing. Even in areas where other cement locating equipment fails, Acoustilog gets the information.

For complete information about how the all new Dual Spaced Acoustilog can save you money and give you more information about your well, call your nearest Lane-Wells office or write P. O. Box 1407, Houston 1, Texas.

*Lane-Wells Service Mark



Acoustilog used to locate cement.



ZONE INTERVAL	NET PAY	R_t	R_w	R_t/R_o	AVERAGE POROSITY	AVERAGE WATER SAT.	POSS. PROD.	BBL. OIL OR MCF PLUS/ACRE
(A) 5209-5216	7	27	.035	770	10.5%	32%	OIL	5760
(B) 5735-5740	5	50	.035	142	18%	43%	OIL	3760

LANE-WELLS CO.
HOUSTON, TEXAS
LOGGING · PERFORATING · PACKERS · BRIDGING PLUGS
ONE OF THE DRESSER INDUSTRIES
DRESSER INDUSTRIES, INC.
OIL · GAS · CHEMICAL · ELECTRONIC · INDUSTRIAL

You're AHEAD with Lane-Wells' Superior Service

NEW

low-cost,
high-potency
fuel oil additive

polyflo 120™

***See your PSE**

Correct selection and most effective use of petroleum inhibitors and additives involves expert analysis and consideration of many factors. As specialists for over a quarter-century, UOP is able to provide unparalleled field service, brought to you by a member of our staff of Product Sales Engineers*. For detailed information on the UOP family of superior inhibitors and additives call or write our Products Department.

- Especially suitable for treating

  No. 2 HEATING OIL and DIESEL FUEL BLENDS

- Maintains fuel oil stability through seasonal storage—even in high summer heat
- Highly effective as color stabilizer—sediment inhibitor—anti-emulsion agent
- Enhances action of other additives, such as copper deactivator
- *Treatment costs only one-fourth to one-half cent per barrel of product.*

Write for information and samples. Address our Products Department.

UOP

UNIVERSAL OIL PRODUCTS COMPANY
30 Algonquin Road, Des Plaines, Illinois, U.S.A.
WHERE RESEARCH TODAY MEANS PROGRESS TOMORROW